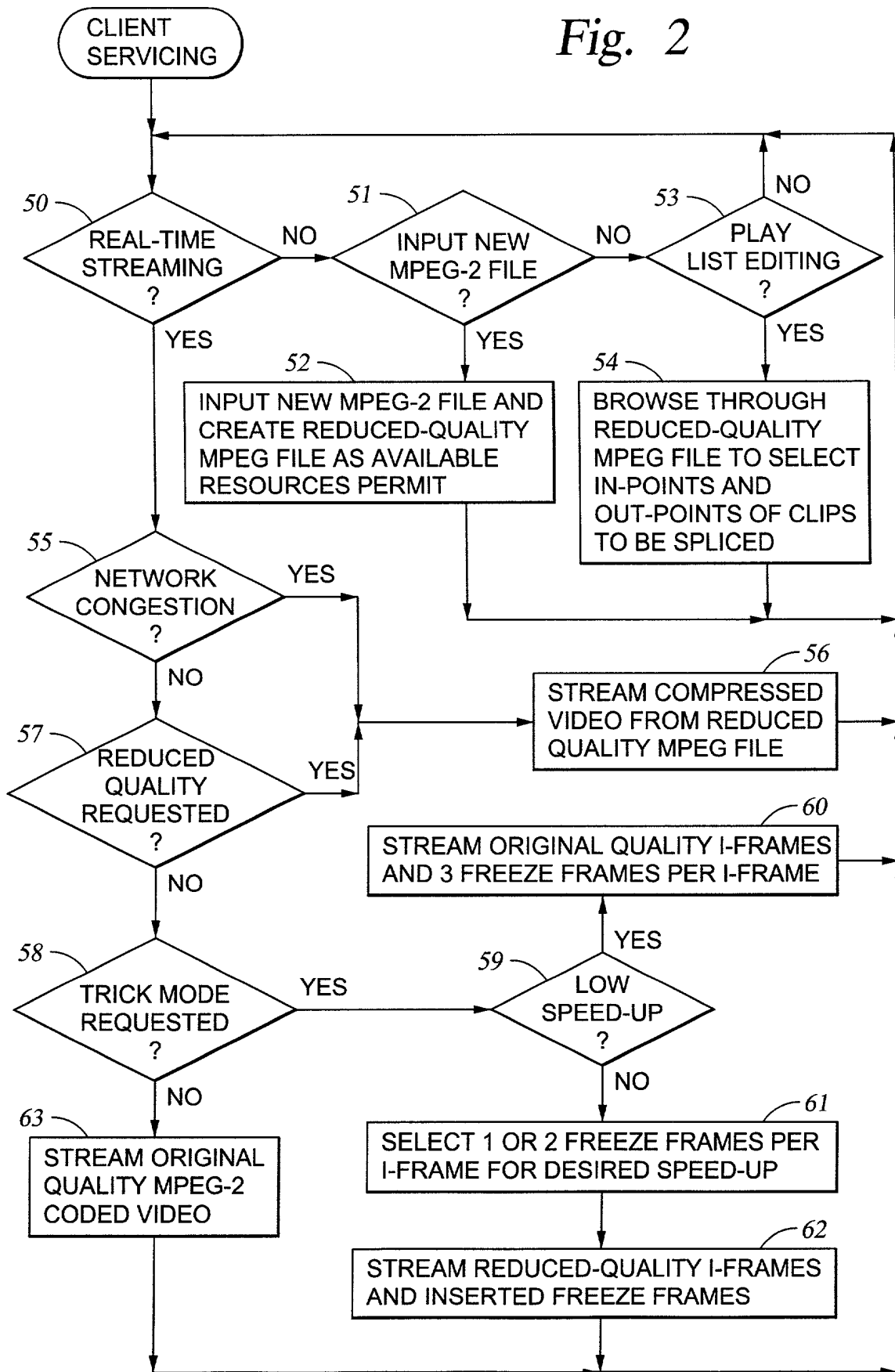


Fig. 1

Fig. 2



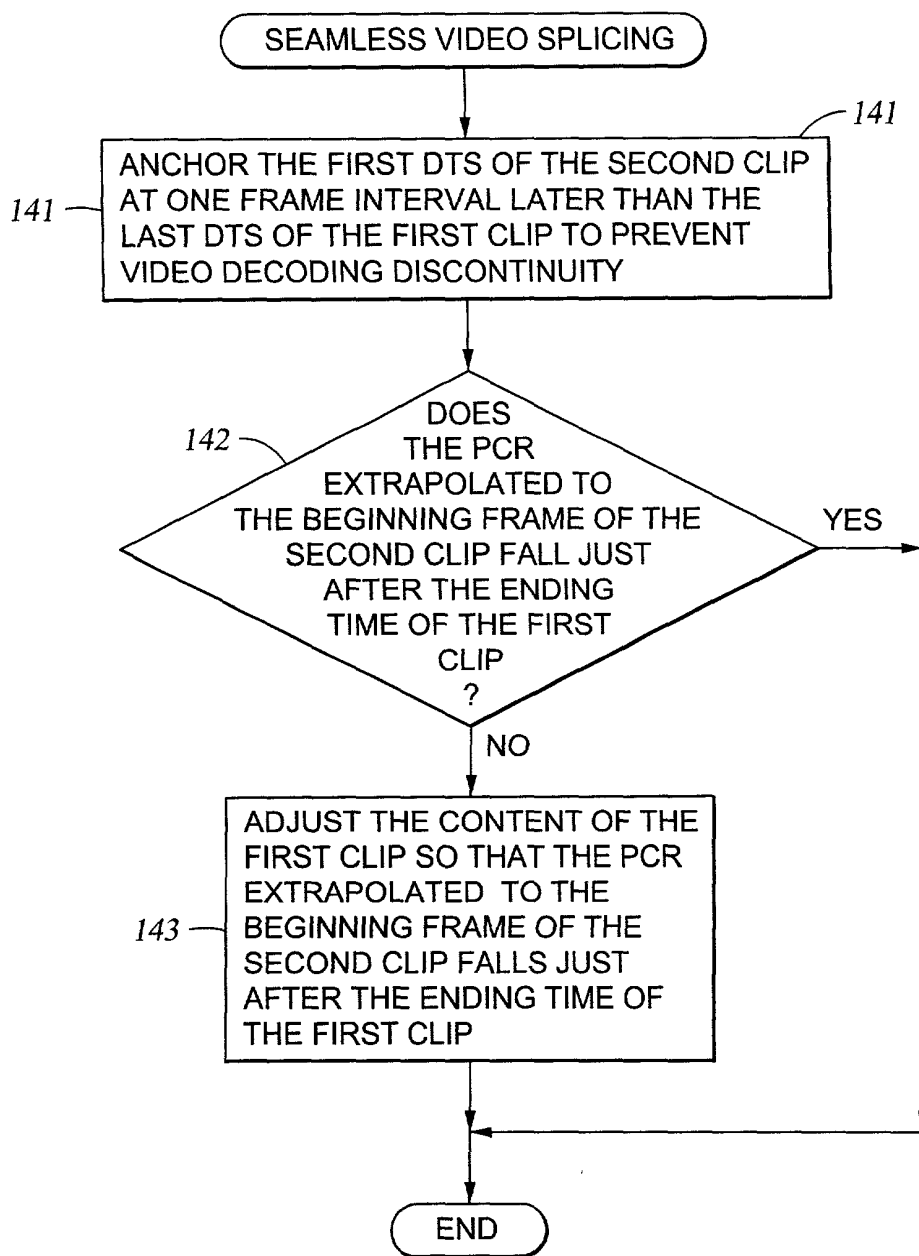


Fig. 4

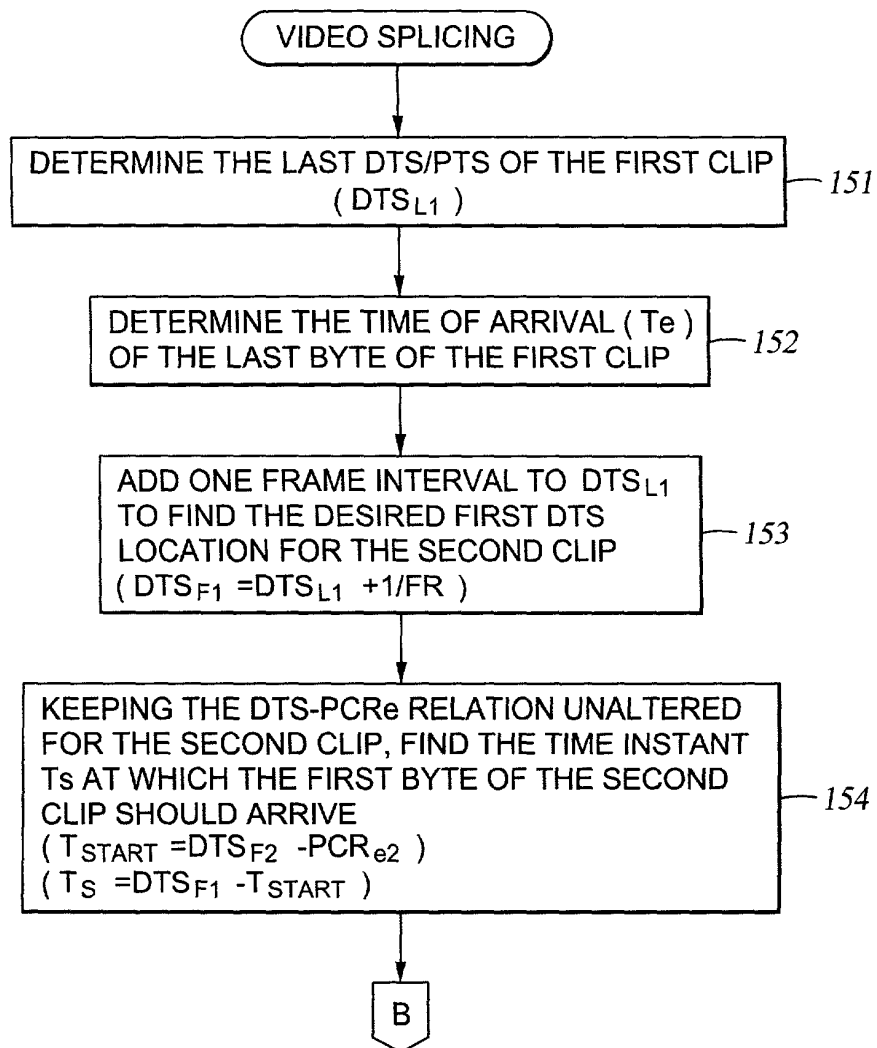
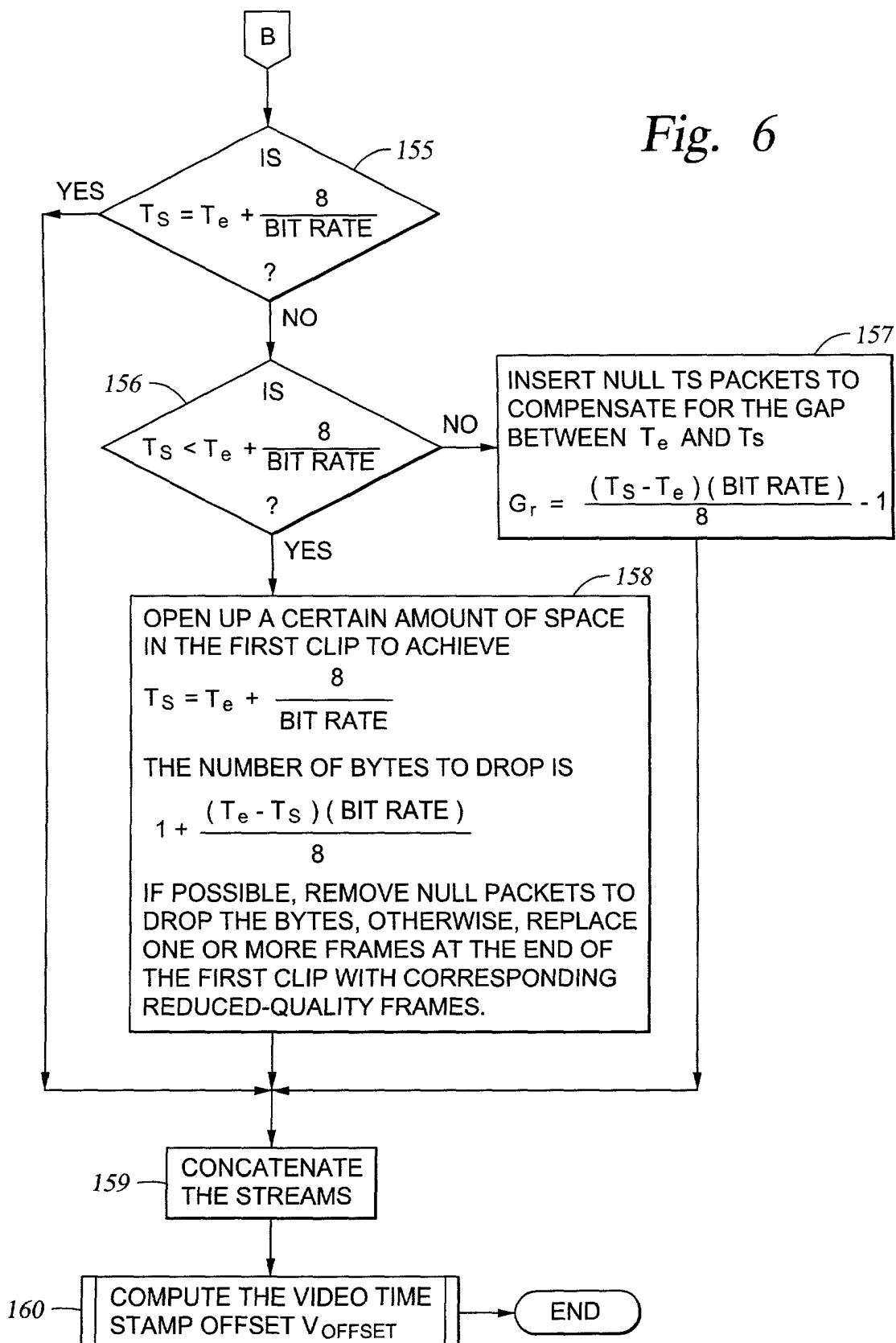


Fig. 5

Fig. 6



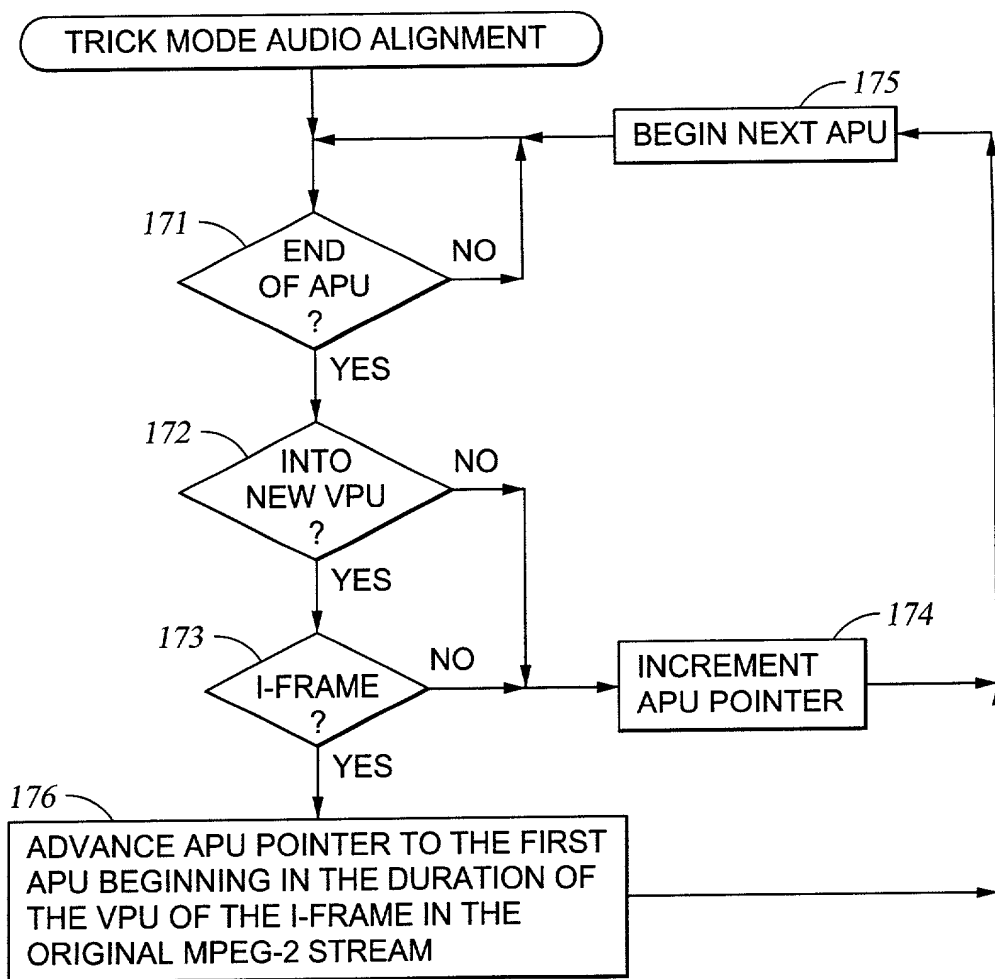
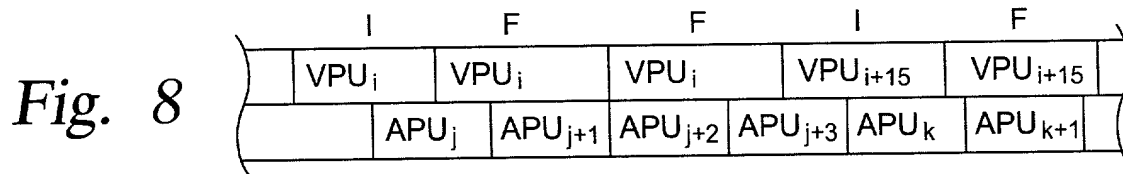
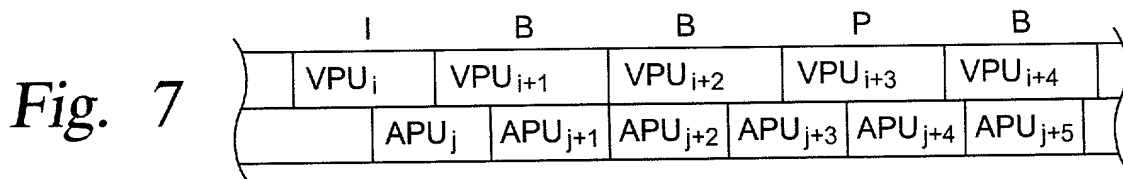


Fig. 9

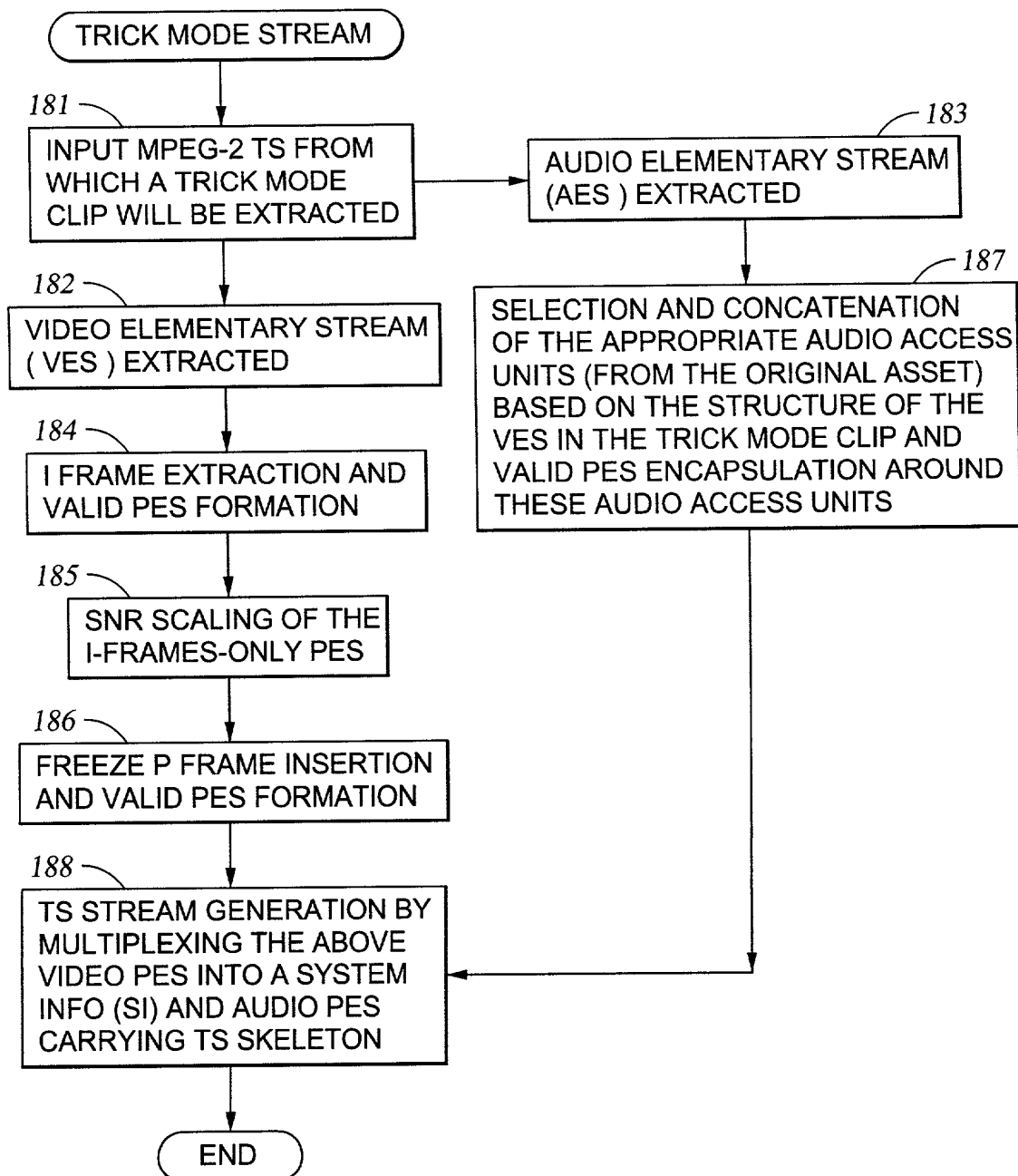


Fig. 10

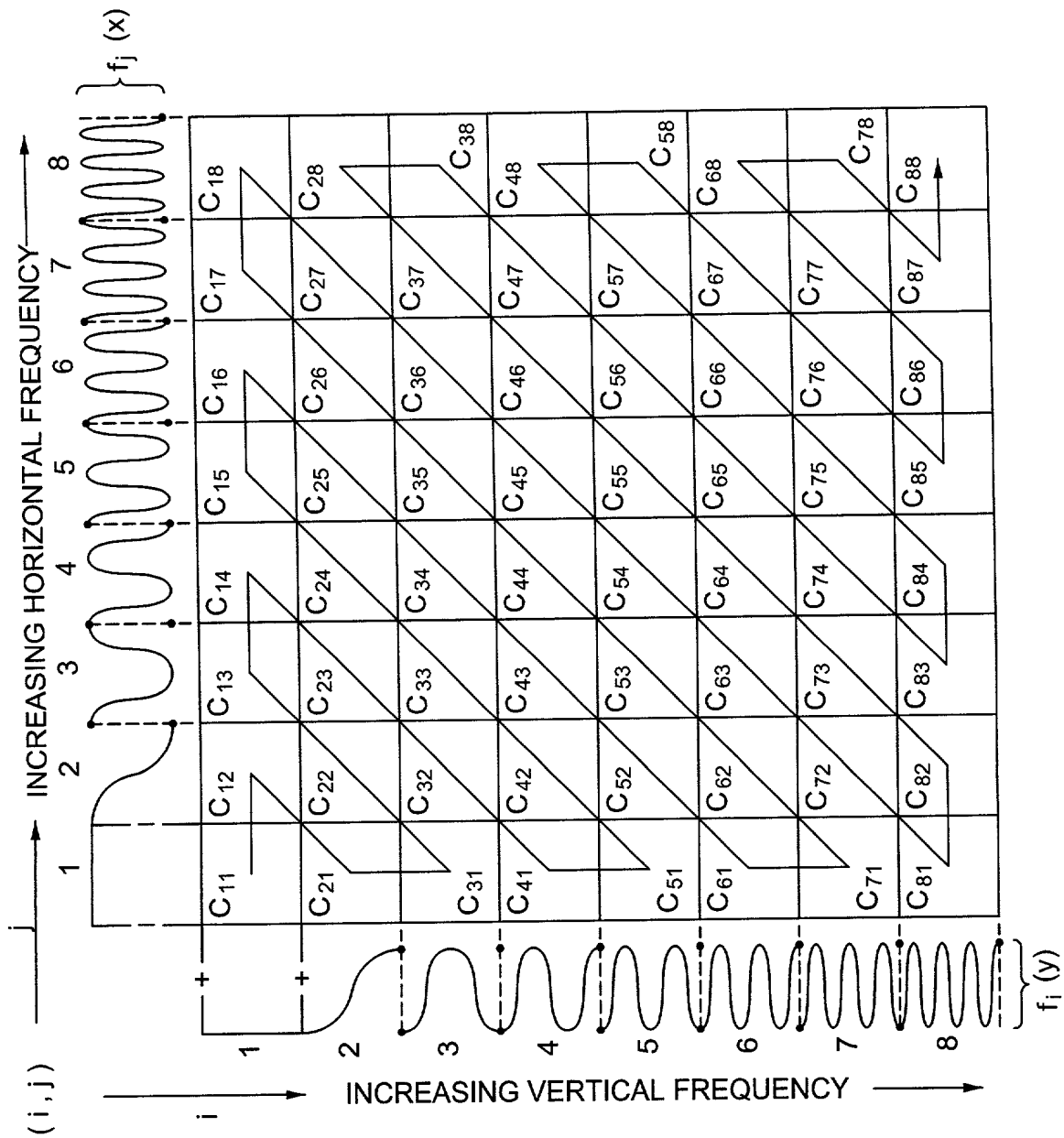


Fig. 11
(PRIOR ART)

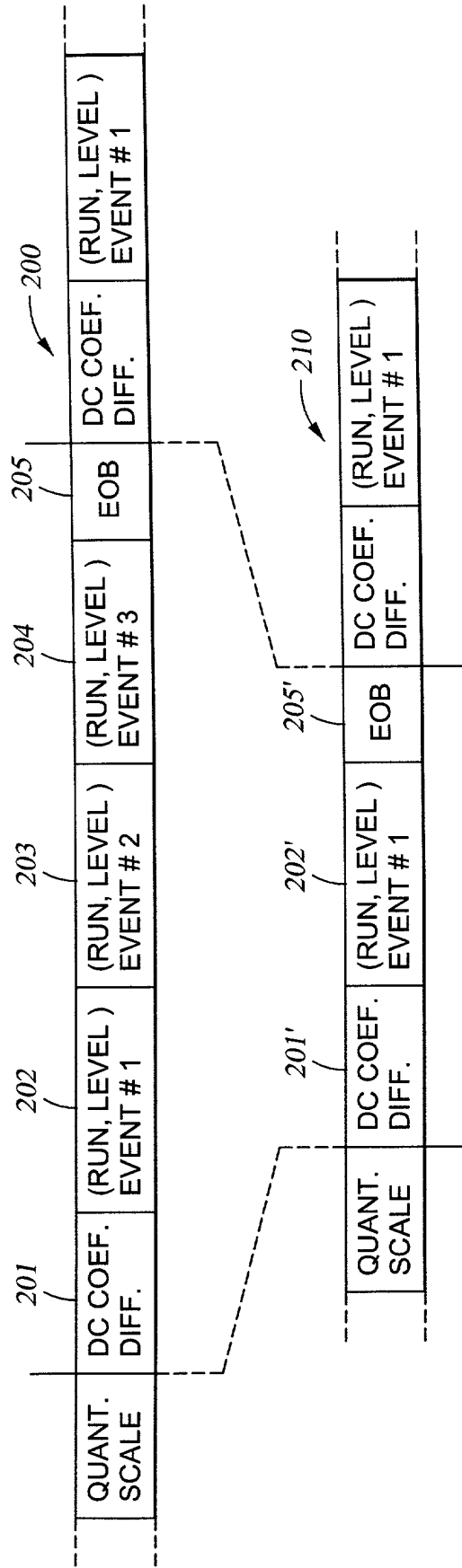


Fig. 12

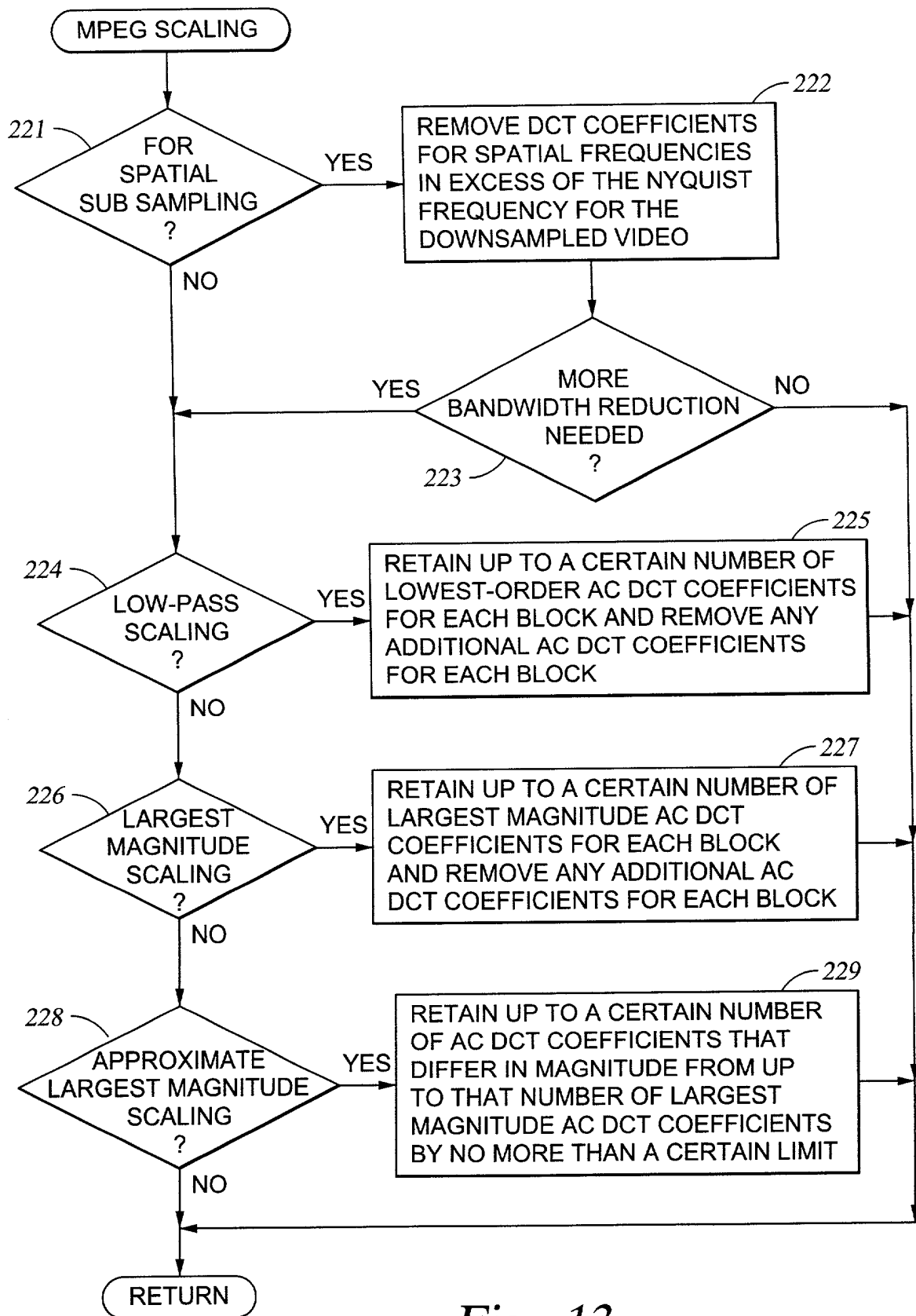


Fig. 13

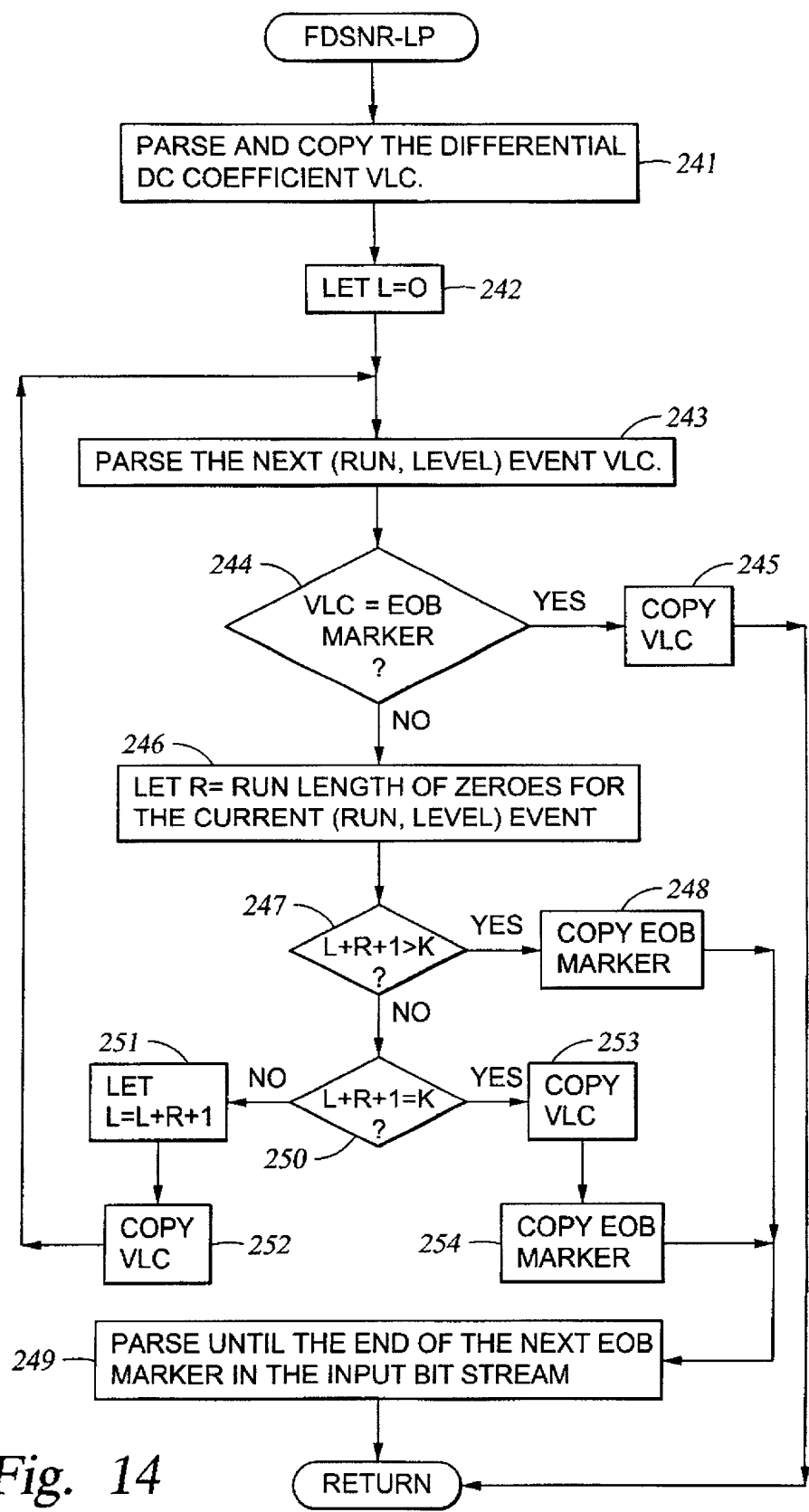


Fig. 14

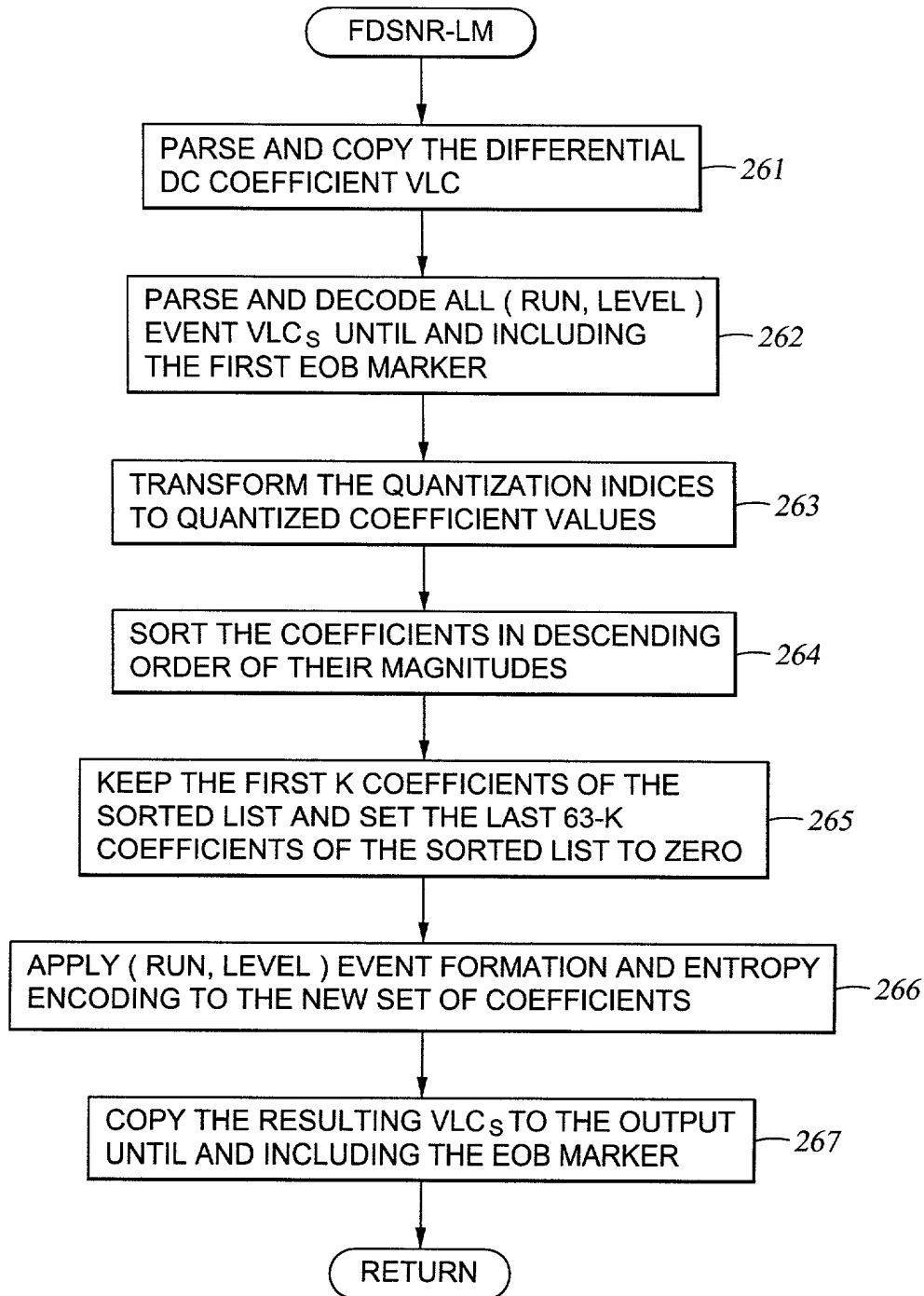


Fig. 15

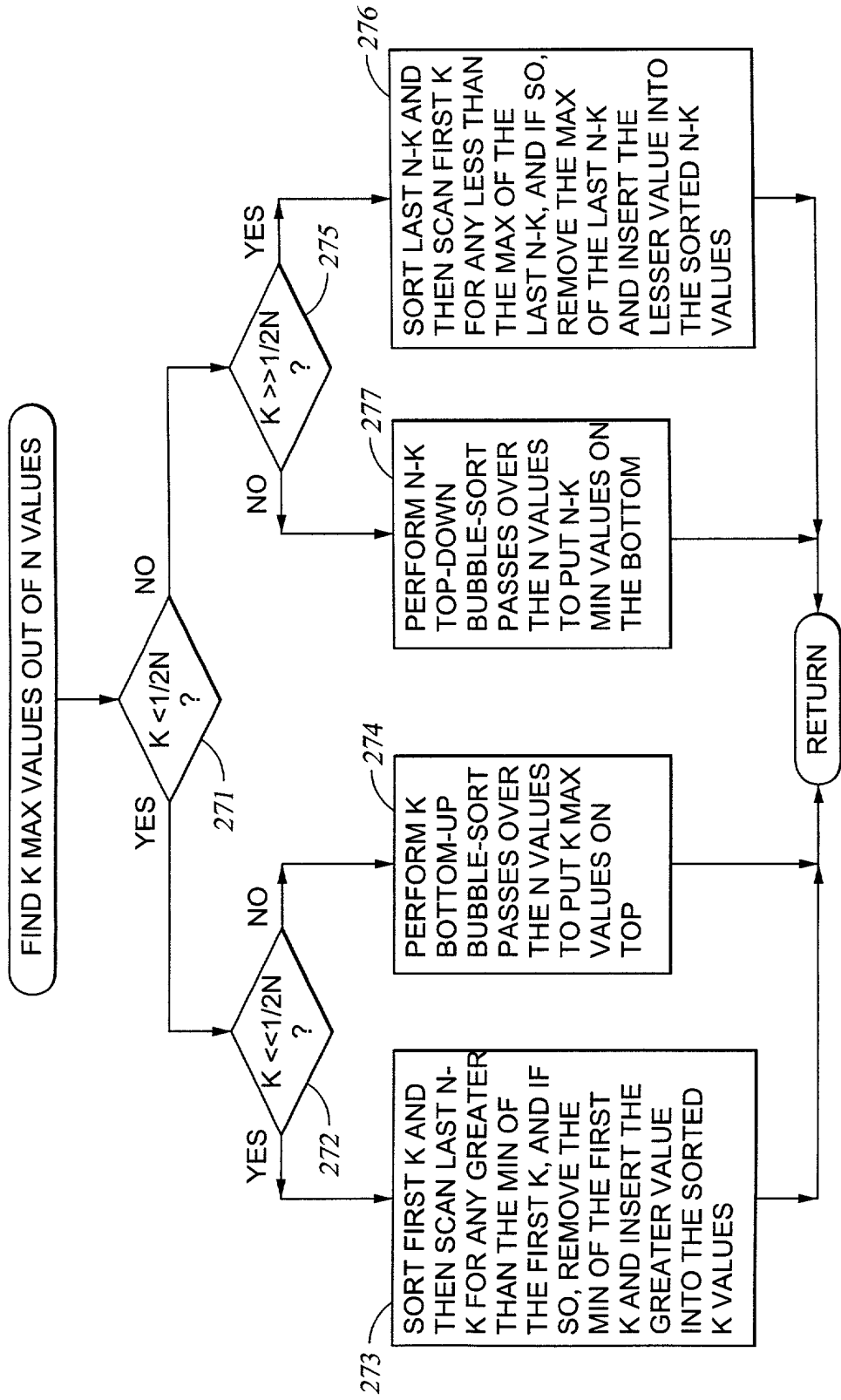


Fig. 16

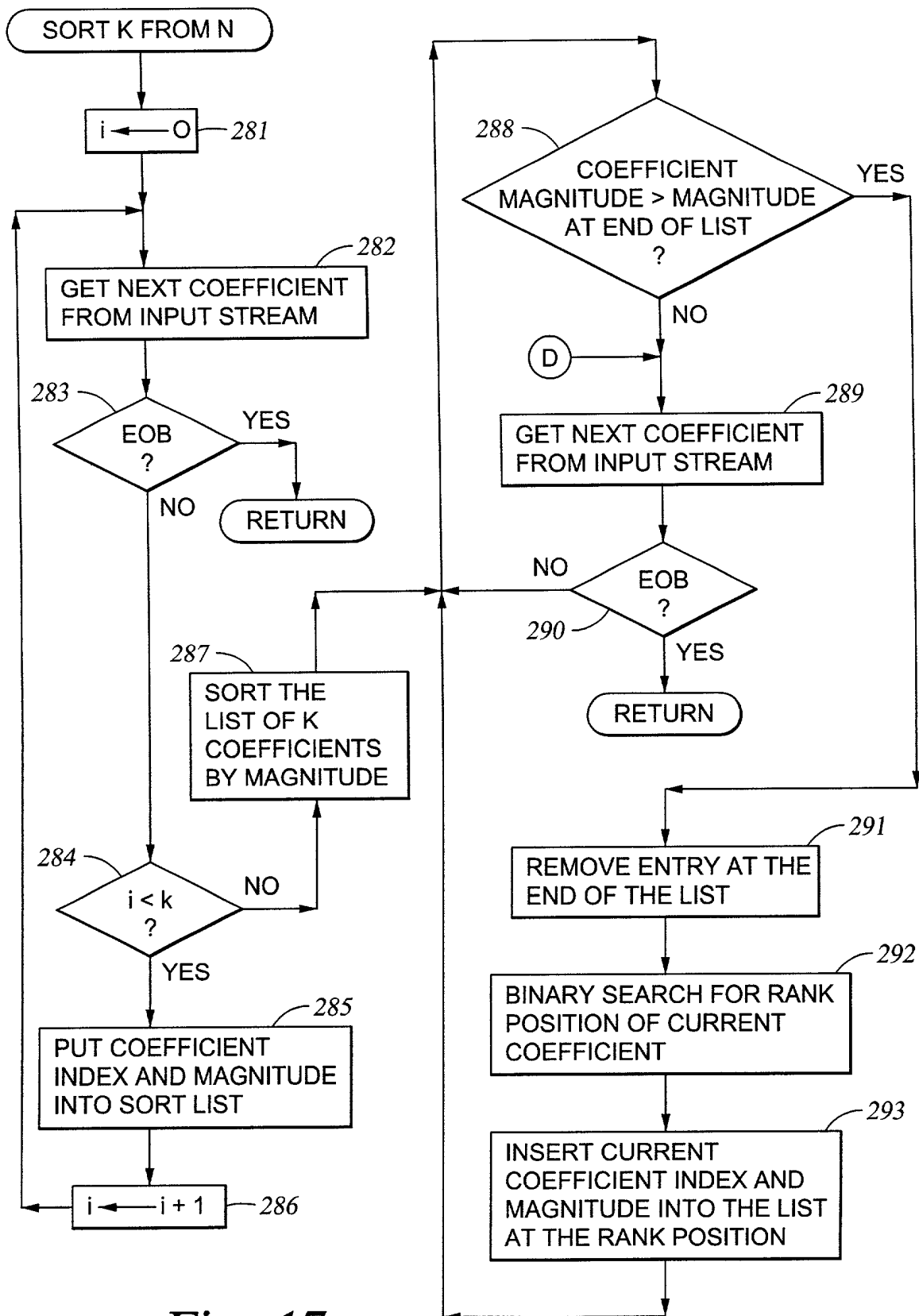


Fig. 17

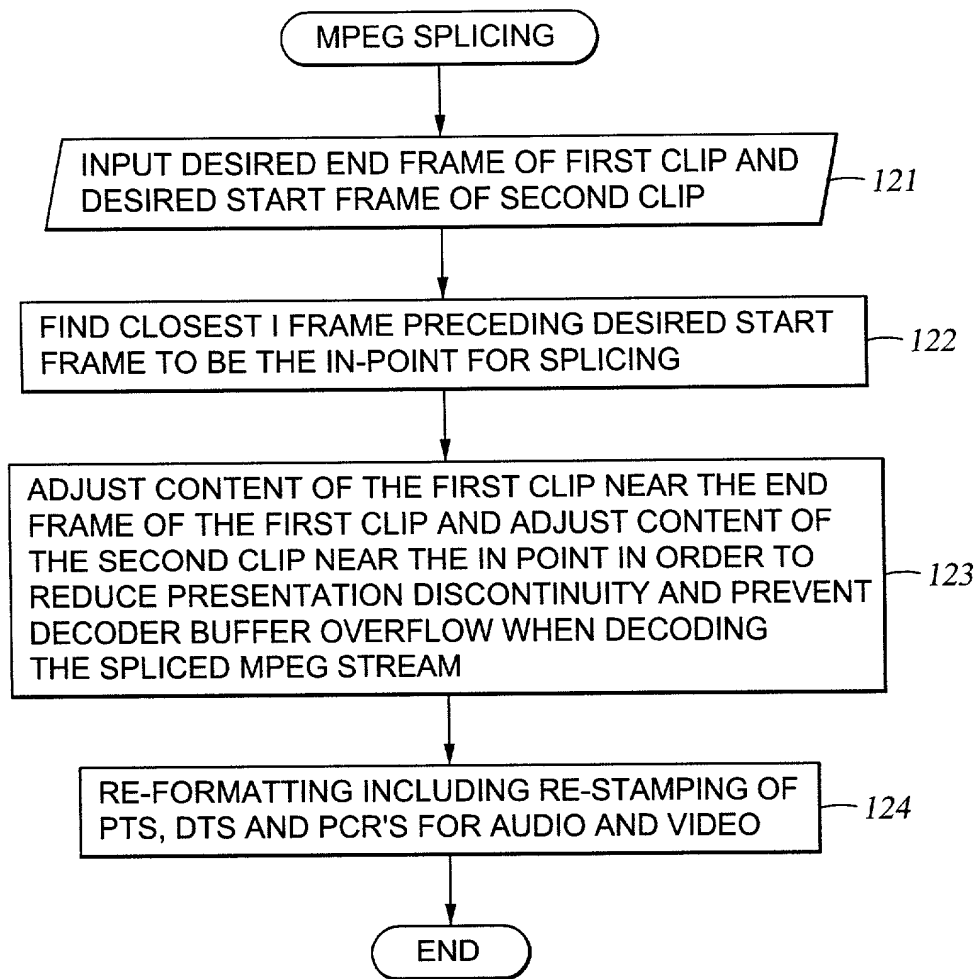


Fig. 3

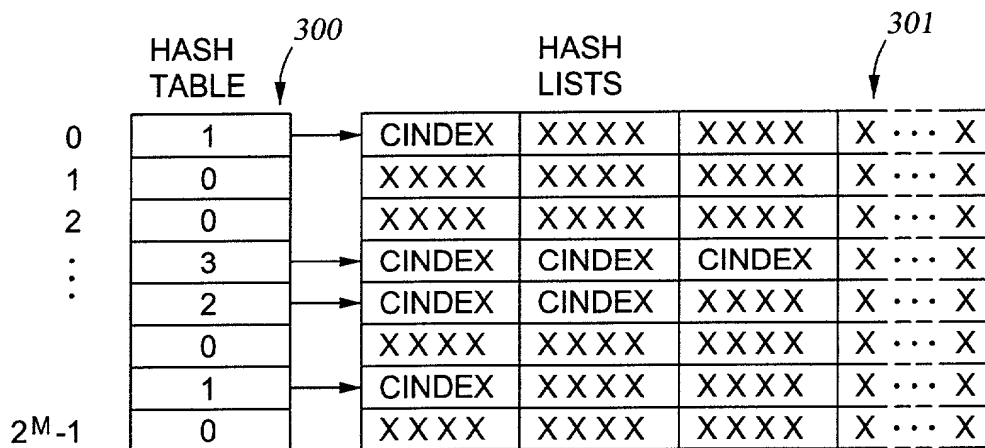


Fig. 18

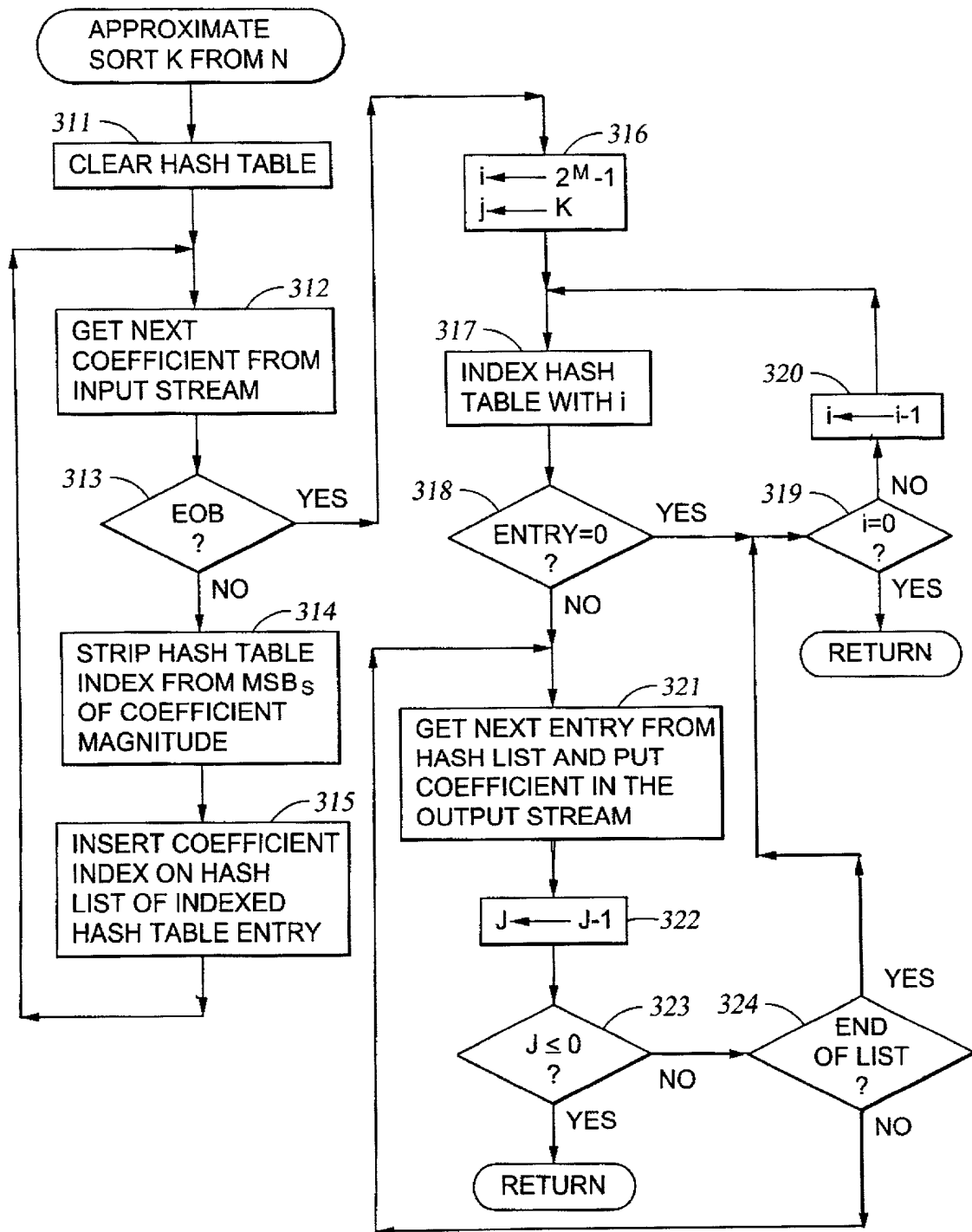


Fig. 19

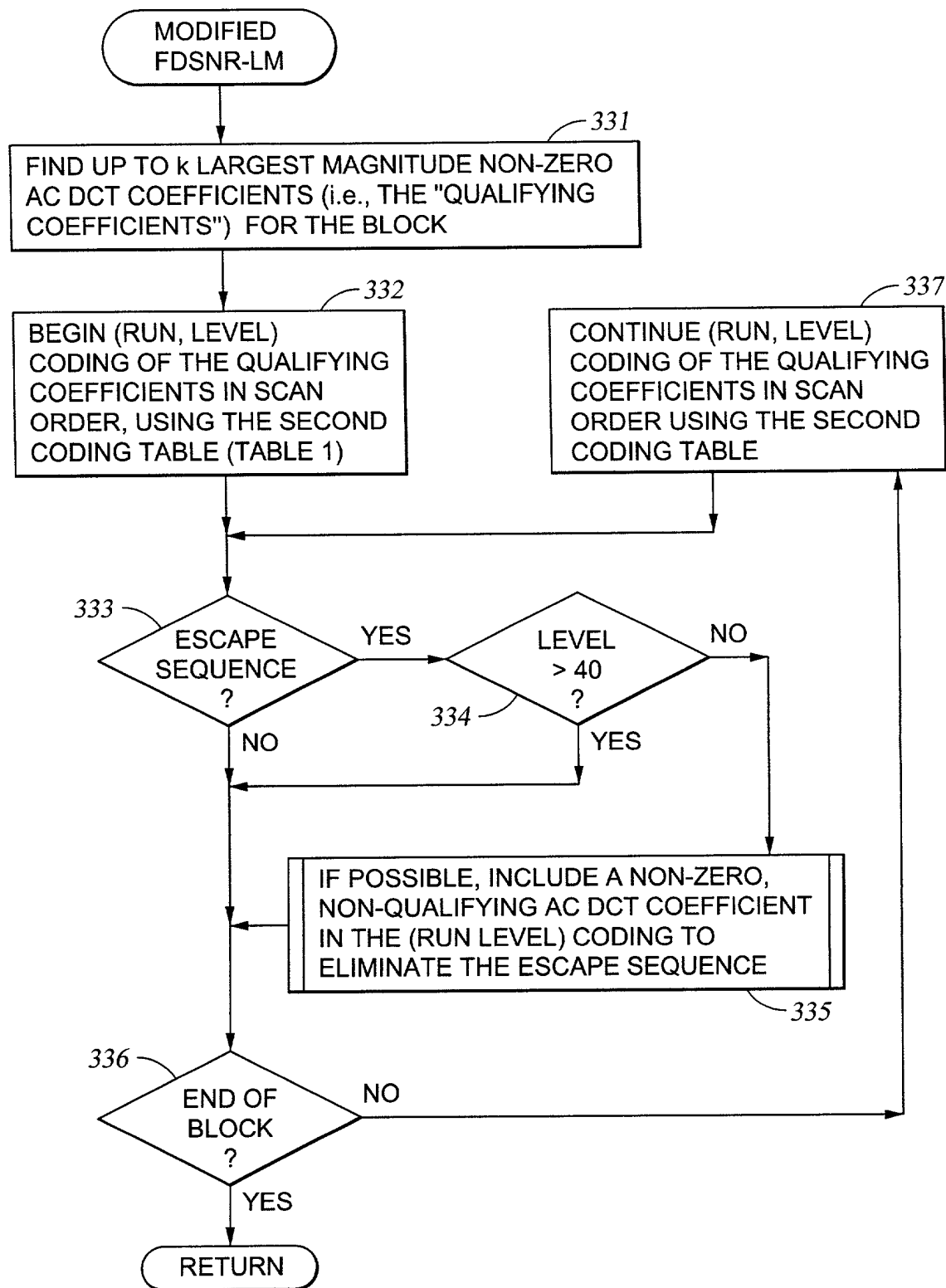


Fig. 20

ATTEMPT ELIMINATION OF ESCAPE SEQUENCE

Fig. 21

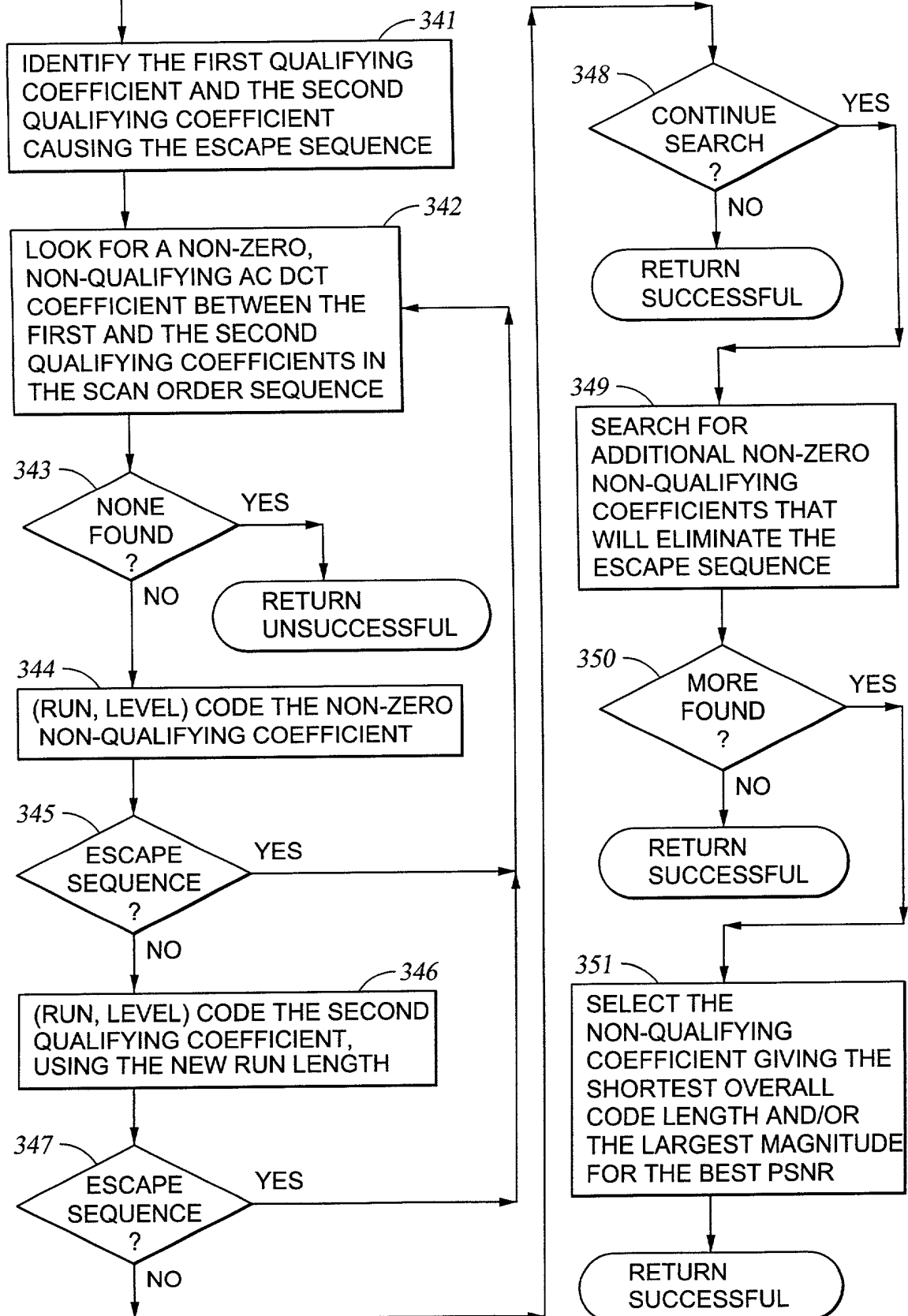


Fig. 22

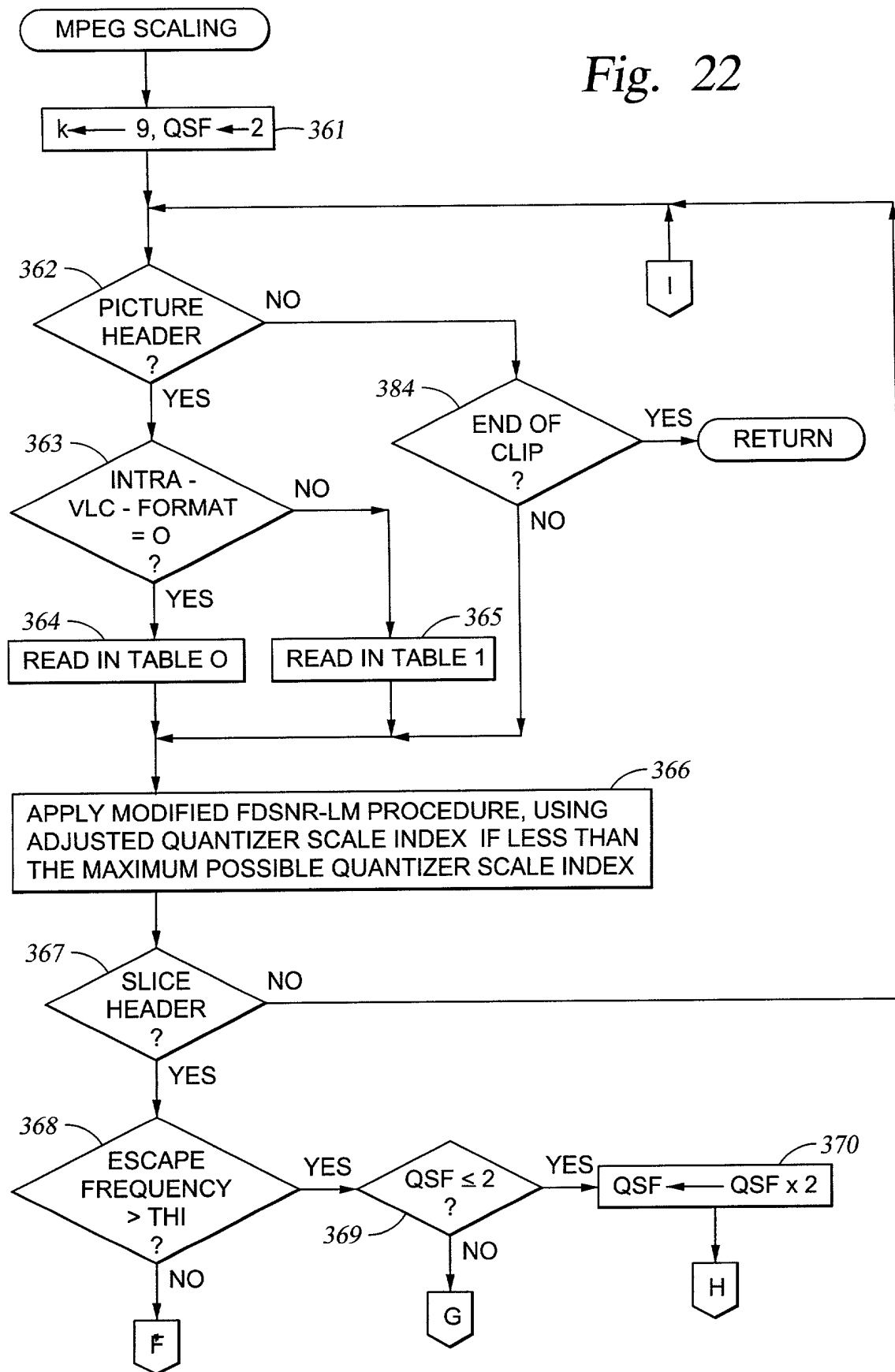
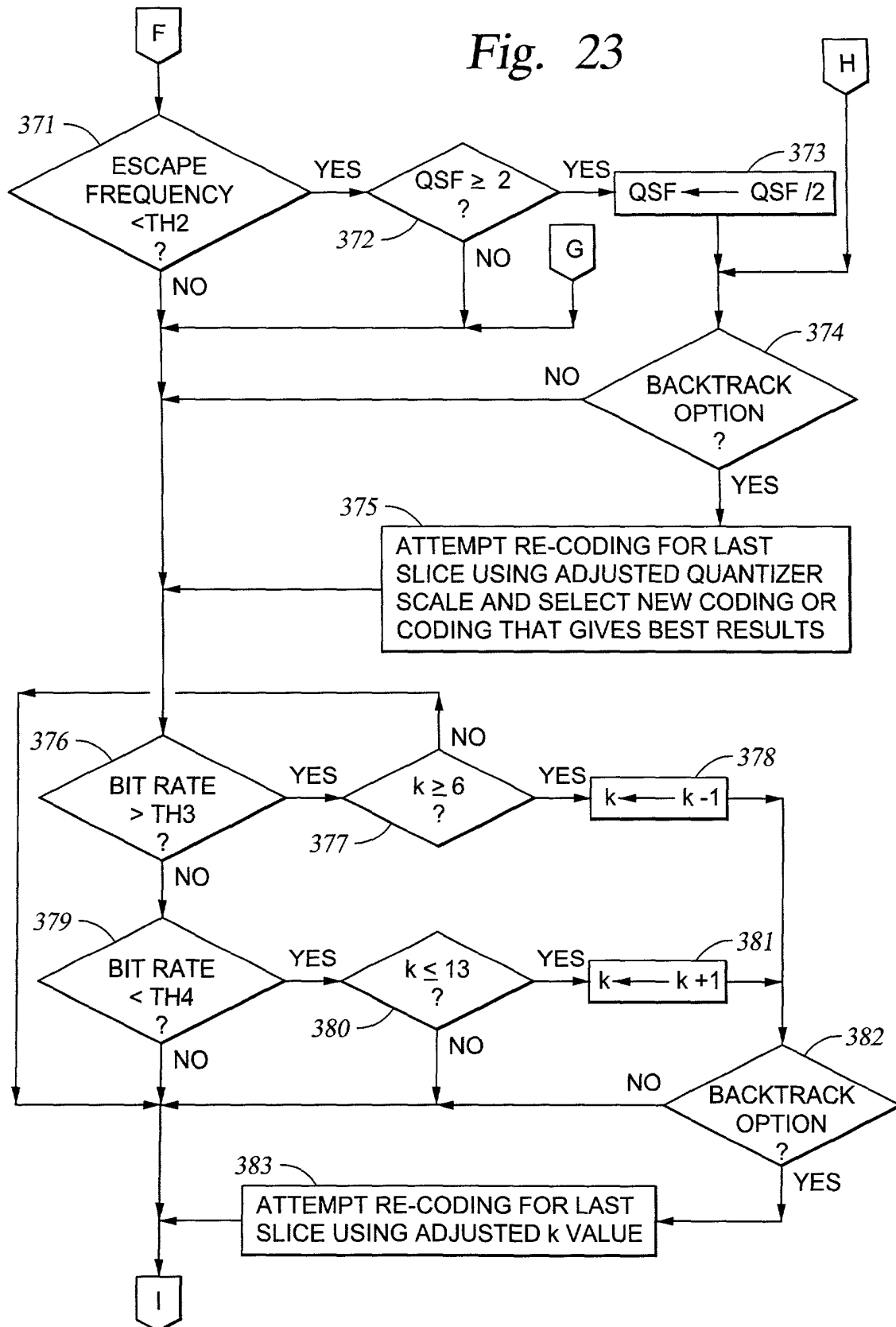


Fig. 23



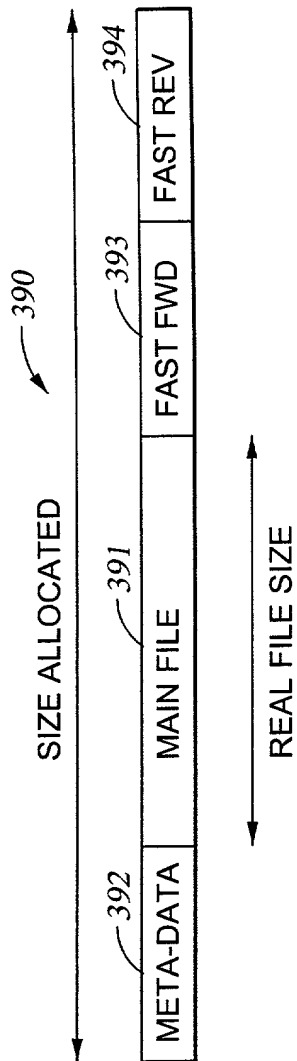


Fig. 24

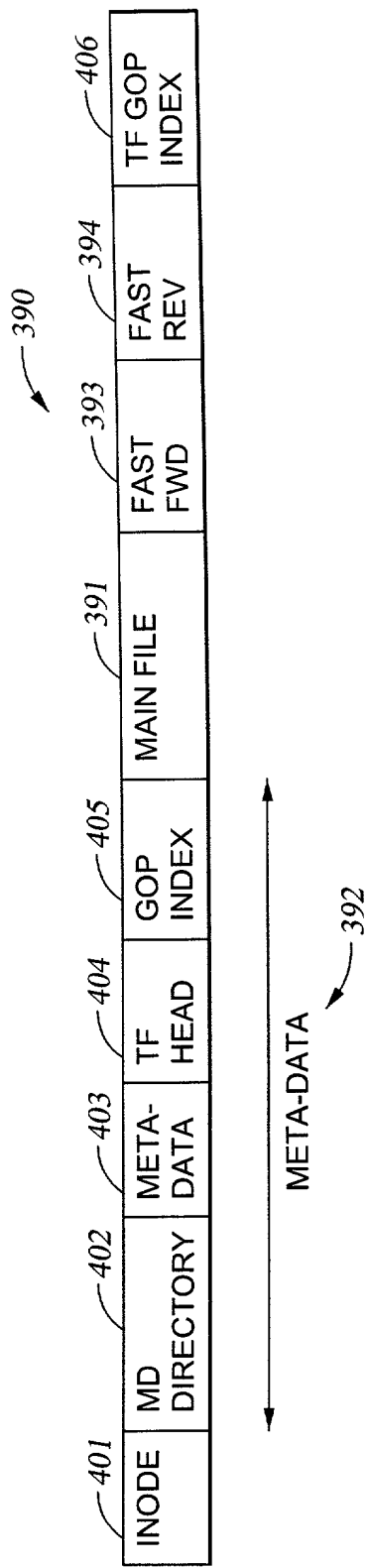


Fig. 25

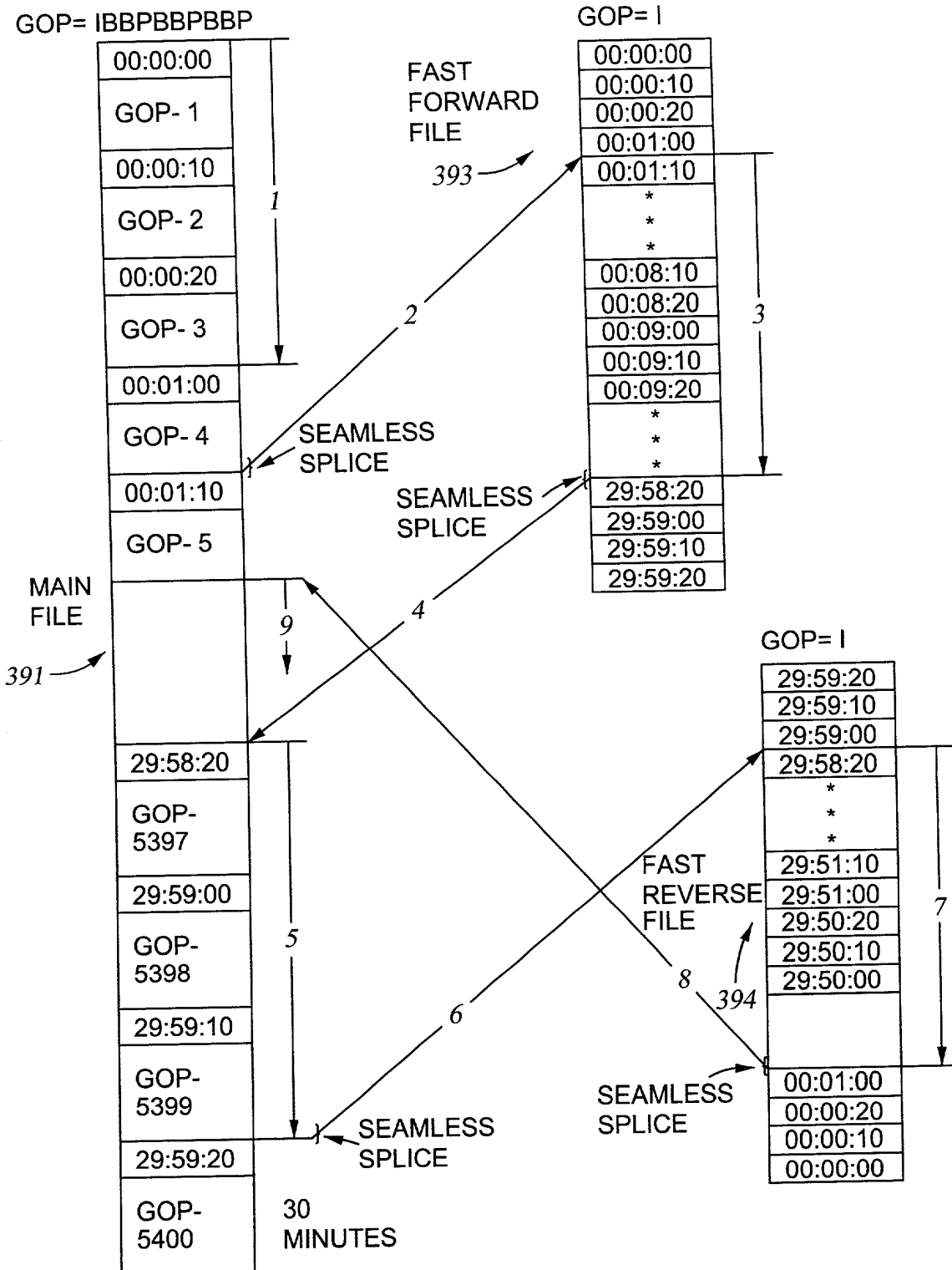


Fig. 26A

Fig. 26B

- 1- Play from start 1 sec
- 2- Pause
- 3- Fast Forward to 29 min
- 4- Pause
- 5- Play 1 sec
- 6- Pause
- 7- Fast Reverse to 1 sec
- 8- Pause
- 9- Play Normal

	READ	WRITE
COPY OF THE ASSET WITH ALL THE DATA	EMPEG2	EMPEG2
COPY ONLY THE MAIN ASSET	RAW	MPEG2
ARCHIVE	EMPEG2	EMPEG2
PLAY	MPEG2	
RECORD		MPEG2

Fig. 27

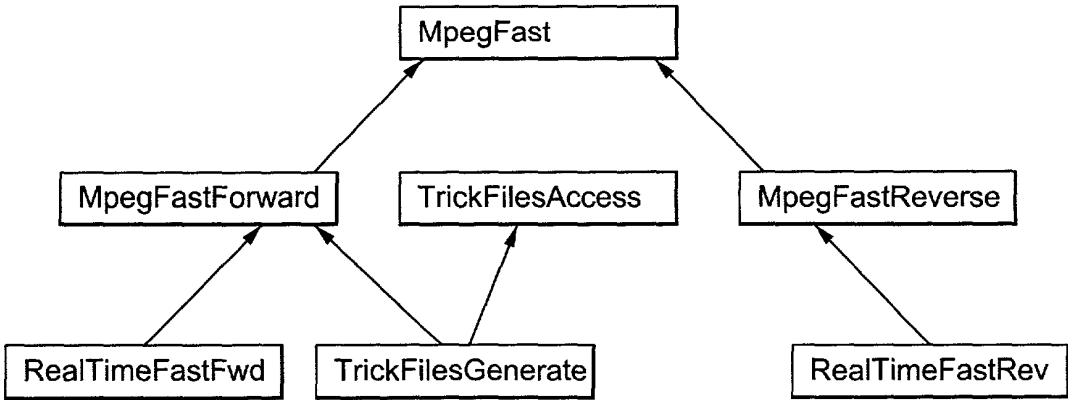


Fig. 28

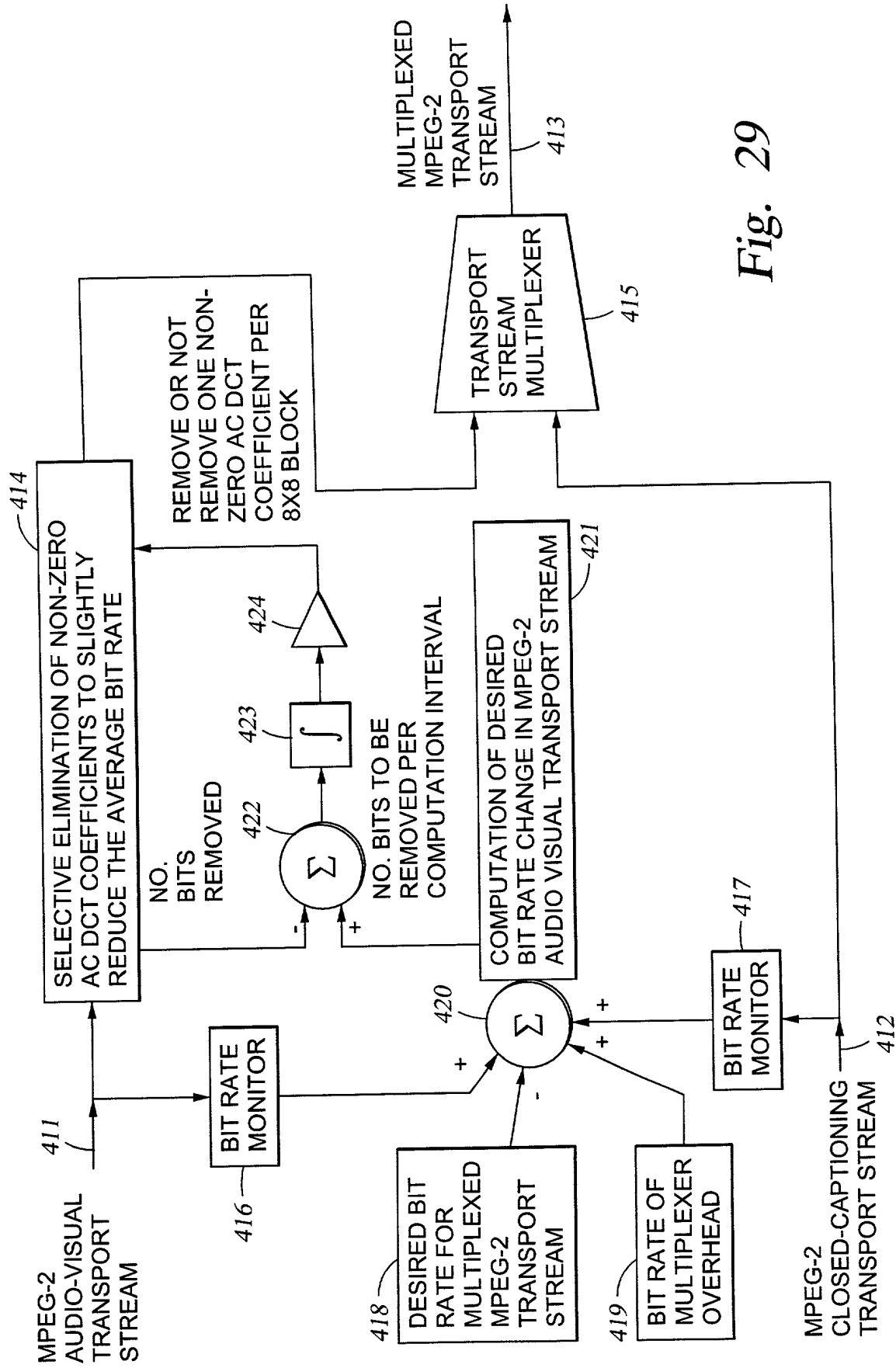


Fig. 29

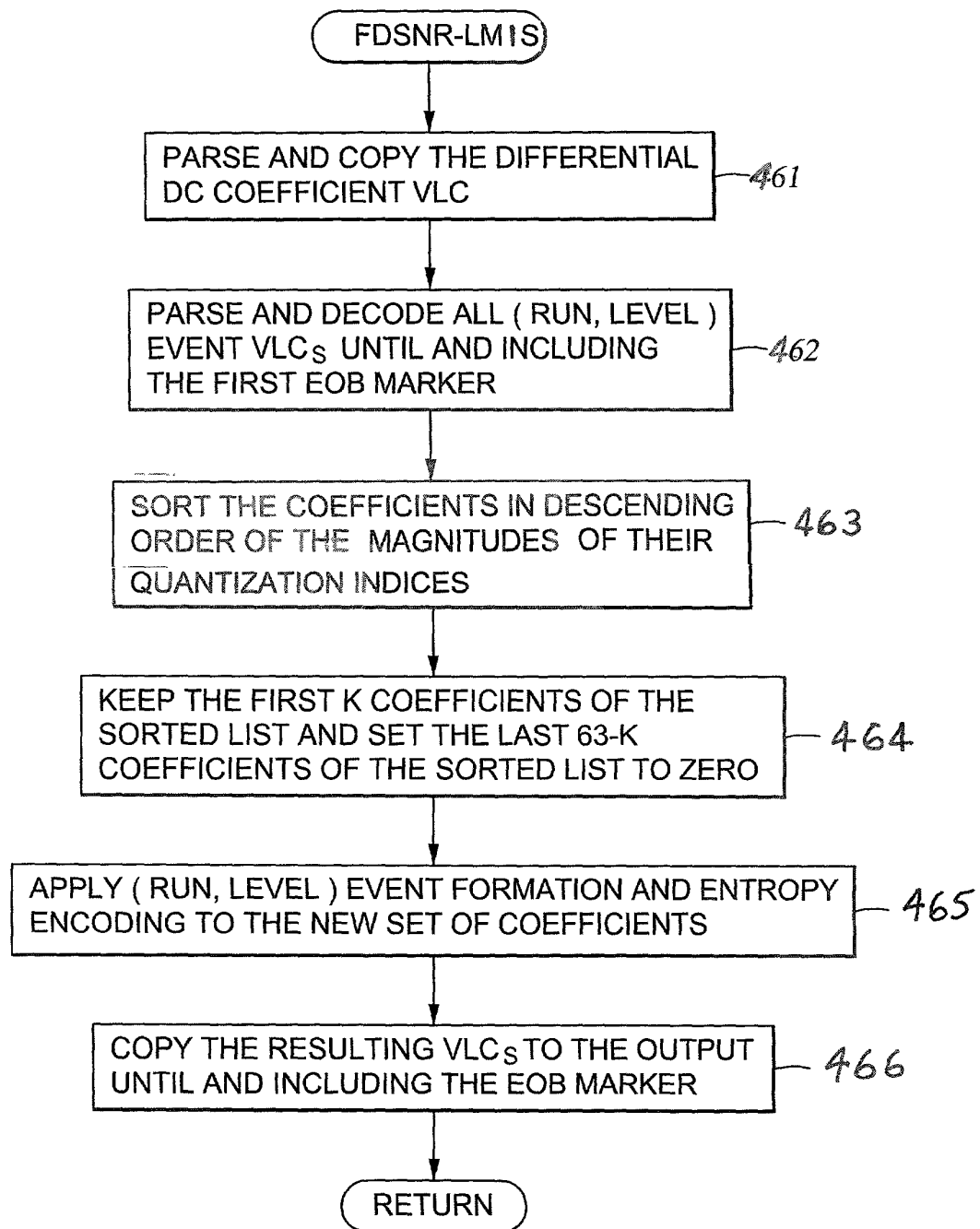


FIG. 30

Comparison of LMCS and LMIS procedures for qsv=2, 4, 6, and 8

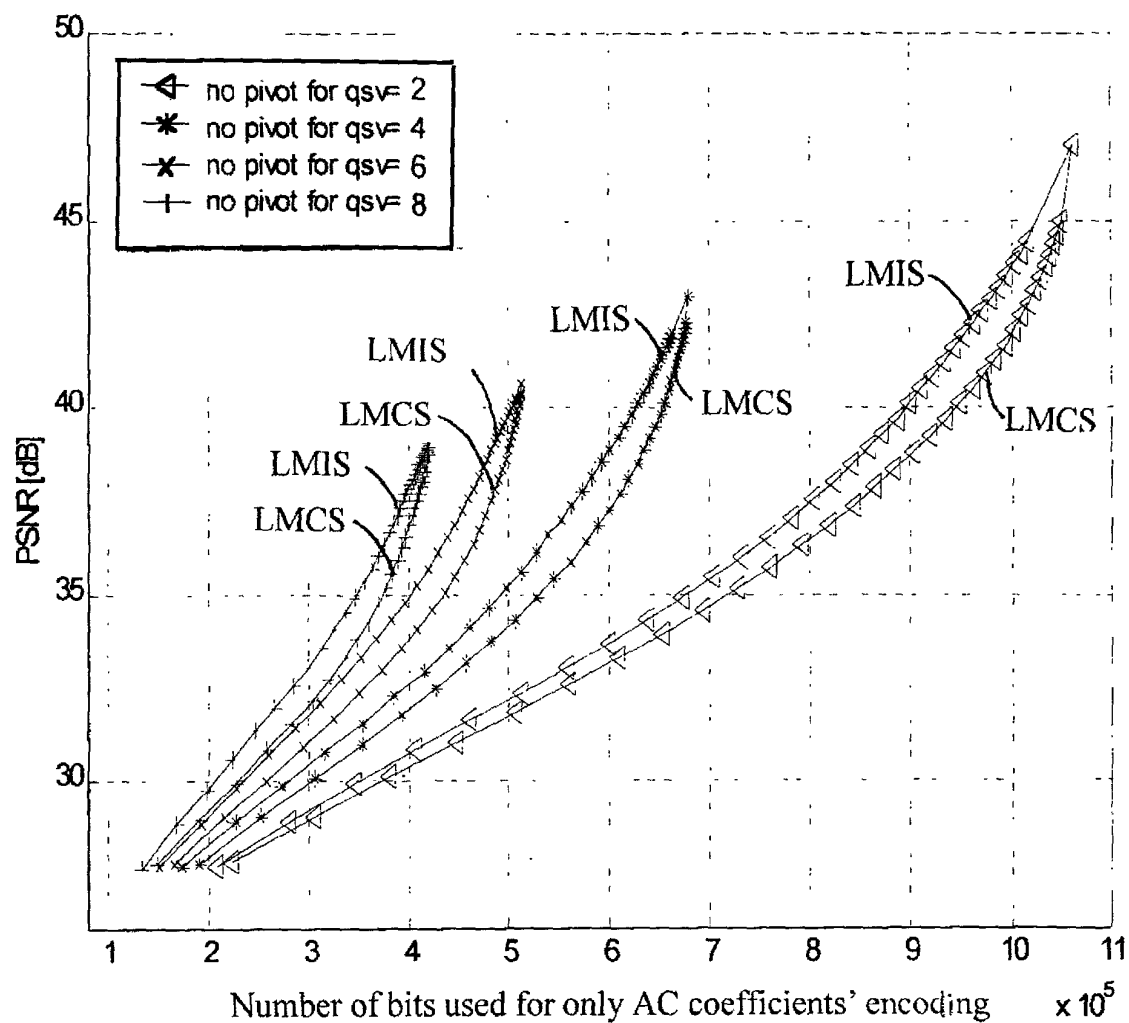


FIG. 31

Comparison of LMCS and LMIS procedures for qsv=12, 16, 20, and 24

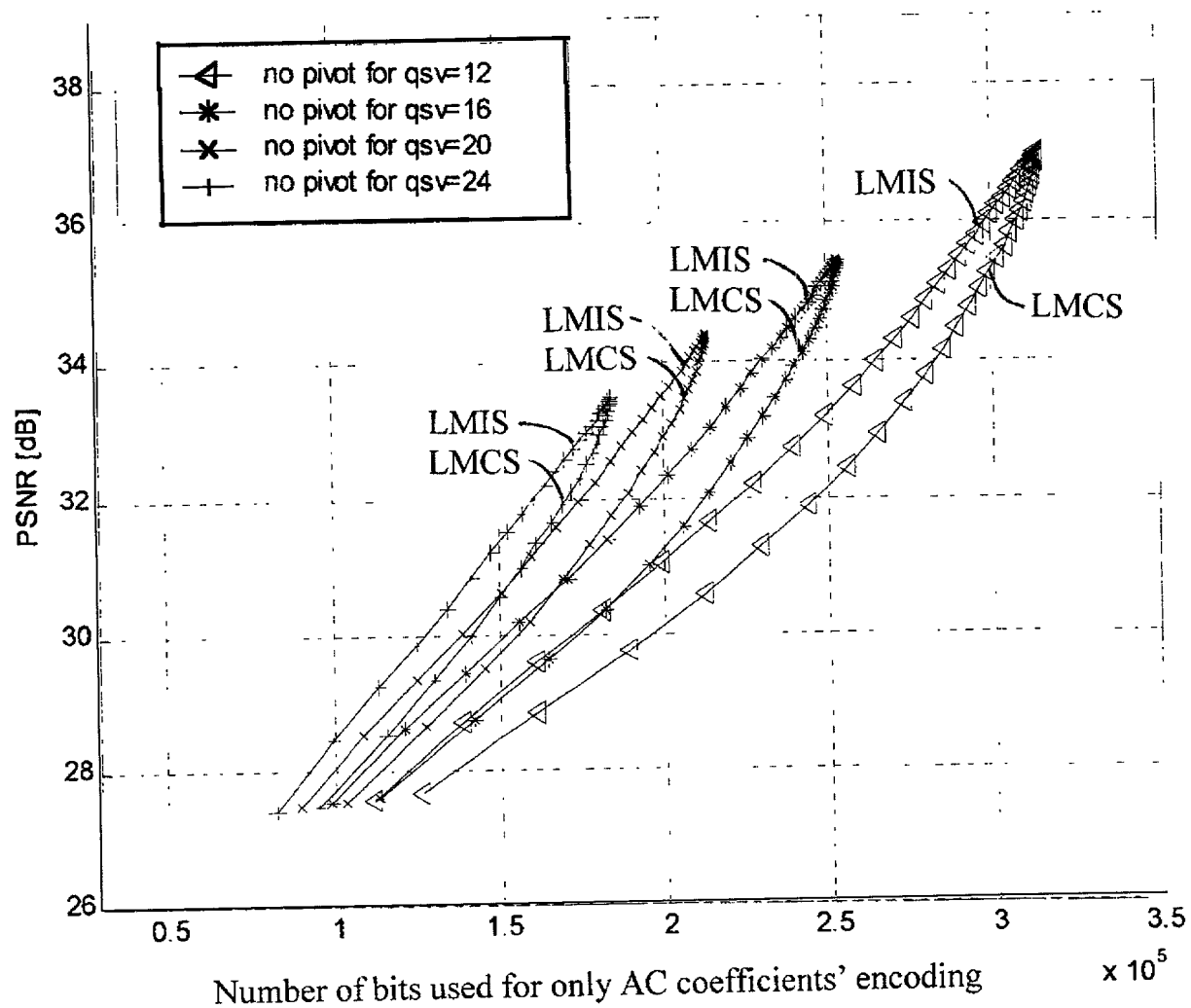


FIG. 32

REDUCTION OF THE NUMBER OF BITS FOR
RUN-LENGTH ENCODING OF TRANSFORM
COEFFICIENTS OF A BLOCK-CODED PICTURE

PIVOT-1 TECHNIQUE

SELECTIVELY RETAIN NON-QUALIFYING
NON-ZERO AC COEFFICIENTS IN ORDER
TO AVOID ESCAPE SEQUENCES

PIVOT-2 TECHNIQUE

REDUCE THE MAGNITUDE OF THE LEVEL OF
THE RETAINED NON-QUALIFYING NON-ZERO
AC COEFFICIENTS TO A VALUE OF ONE IN
ORDER TO REDUCE THE NUMBER OF BITS
FOR (RUN, LEVEL) ENCODING OF THE
RETAINED NON-QUALIFYING NON-ZERO
AC COEFFICIENTS

PIVOT-3 TECHNIQUE

AVOID ESCAPE SEQUENCES AND/OR REDUCE
THE NUMBER OF BITS FOR (RUN, LEVEL)
ENCODING BY SELECTIVELY INSERTING A
NOISE COEFFICIENT OF LEVEL MAGNITUDE
EQUAL TO ONE (I.E., A PIVOT POINT WHICH IS
A COEFFICIENT NOT FOUND IN THE ENCODING
OF THE ORIGINAL PICTURE) IN THE SCAN
ORDER JUST BEFORE EACH QUALIFYING
NON-ZERO AC COEFFICIENT

FIG. 33

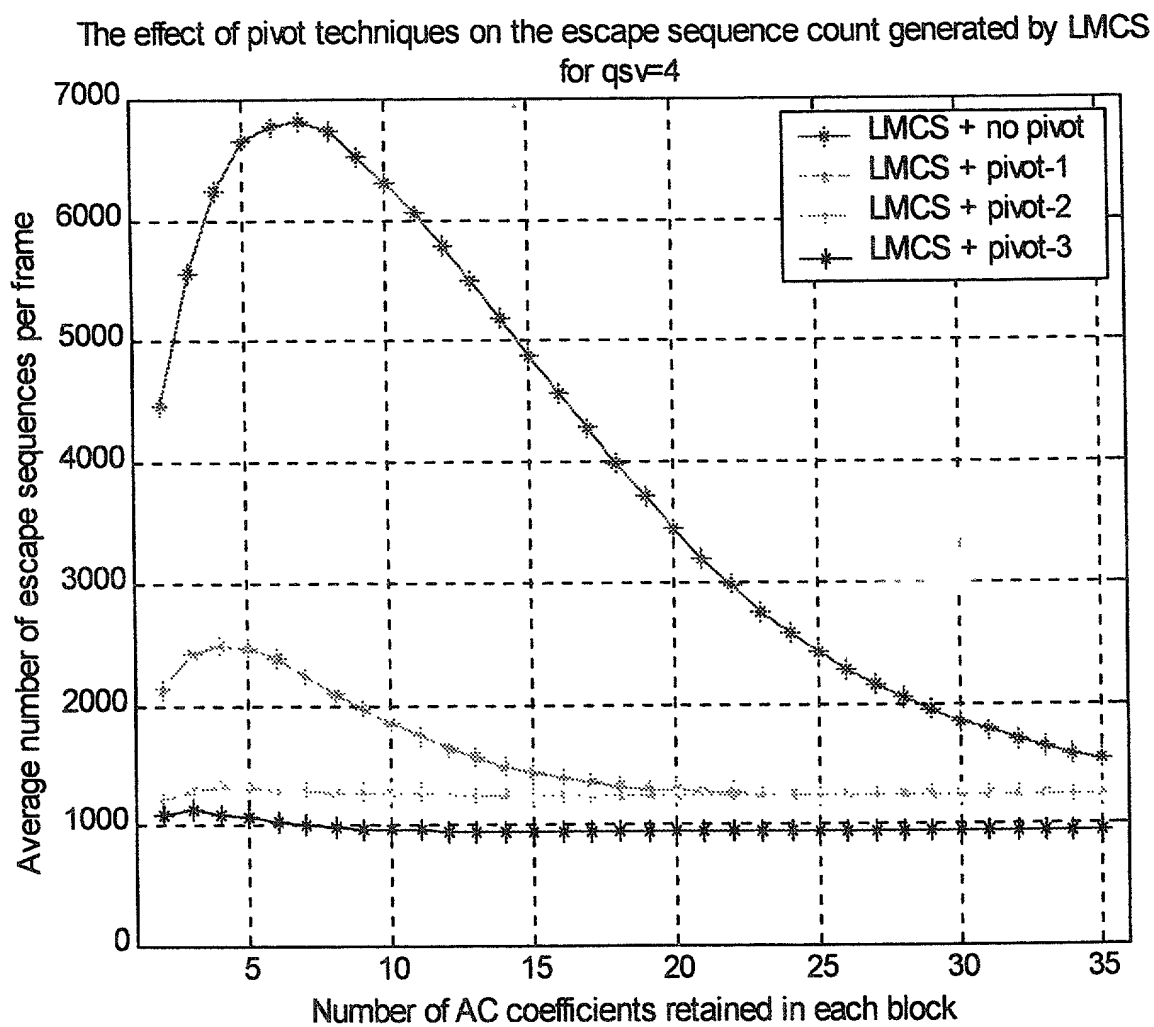


FIG. 34

The effect of pivot techniques on the escape sequence count generated by LMCS
for $qsv=24$

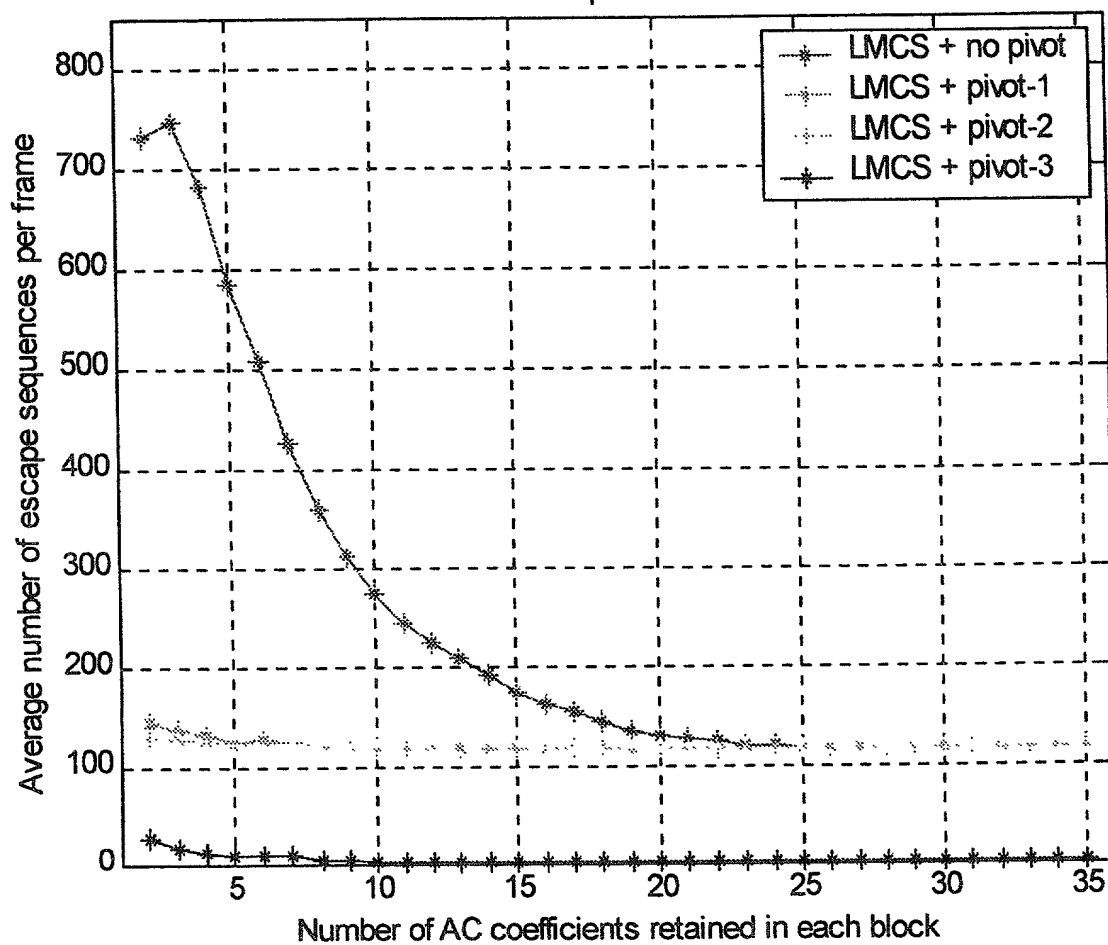


FIG. 35

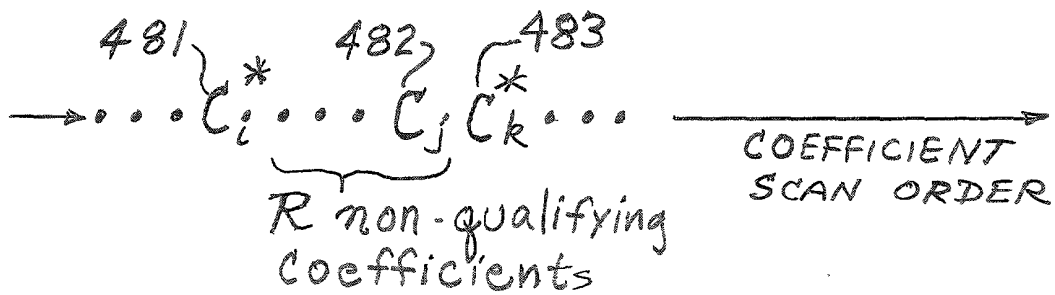


FIG. 36

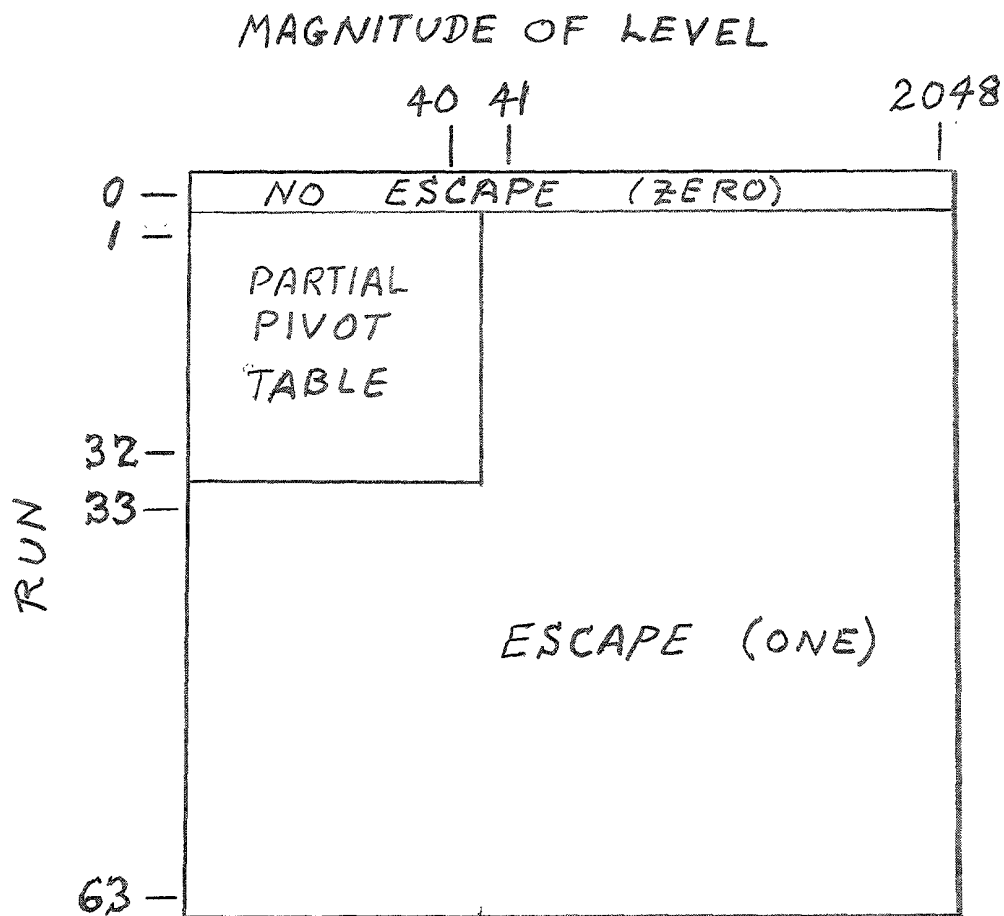


FIG. 37

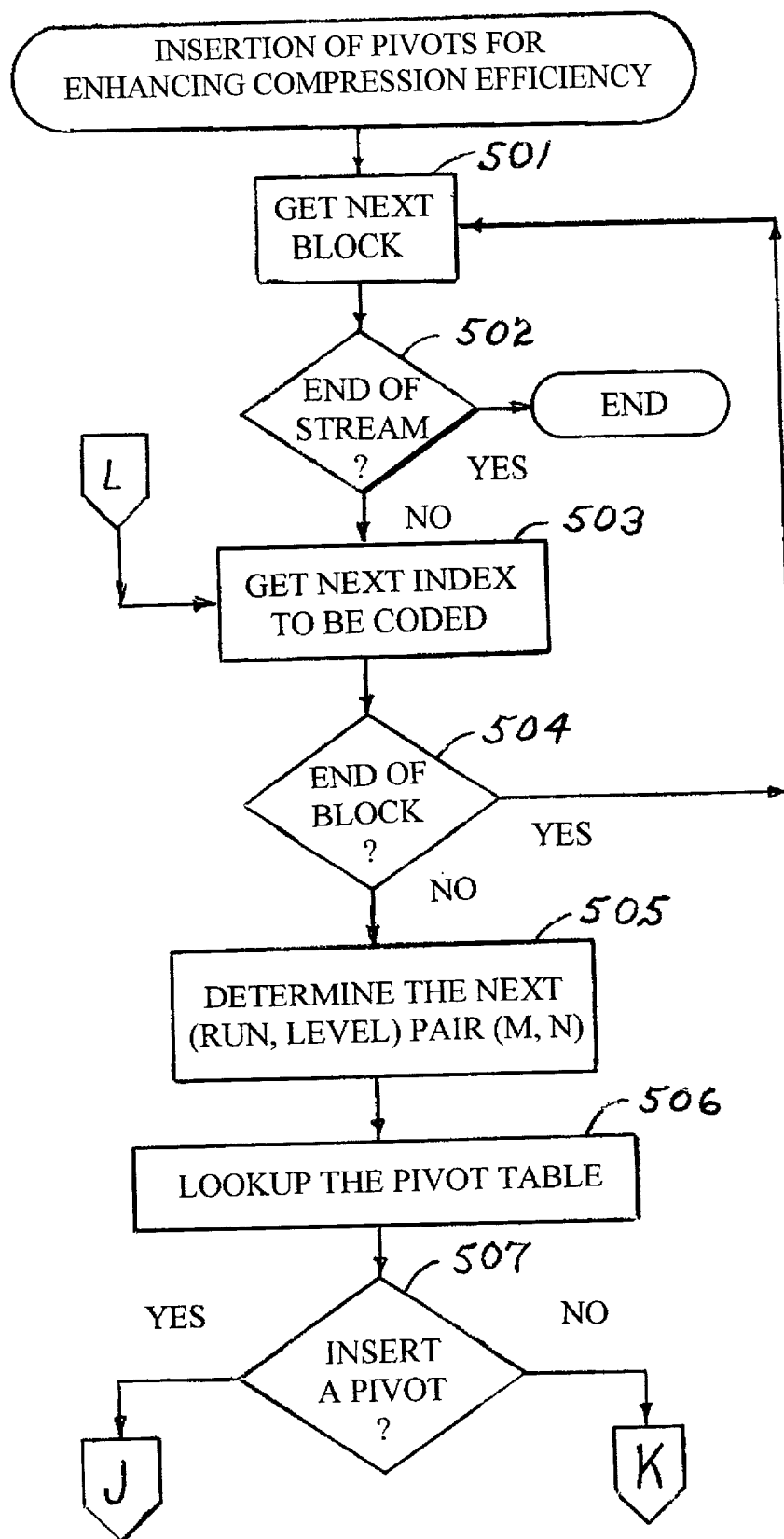


FIG. 38

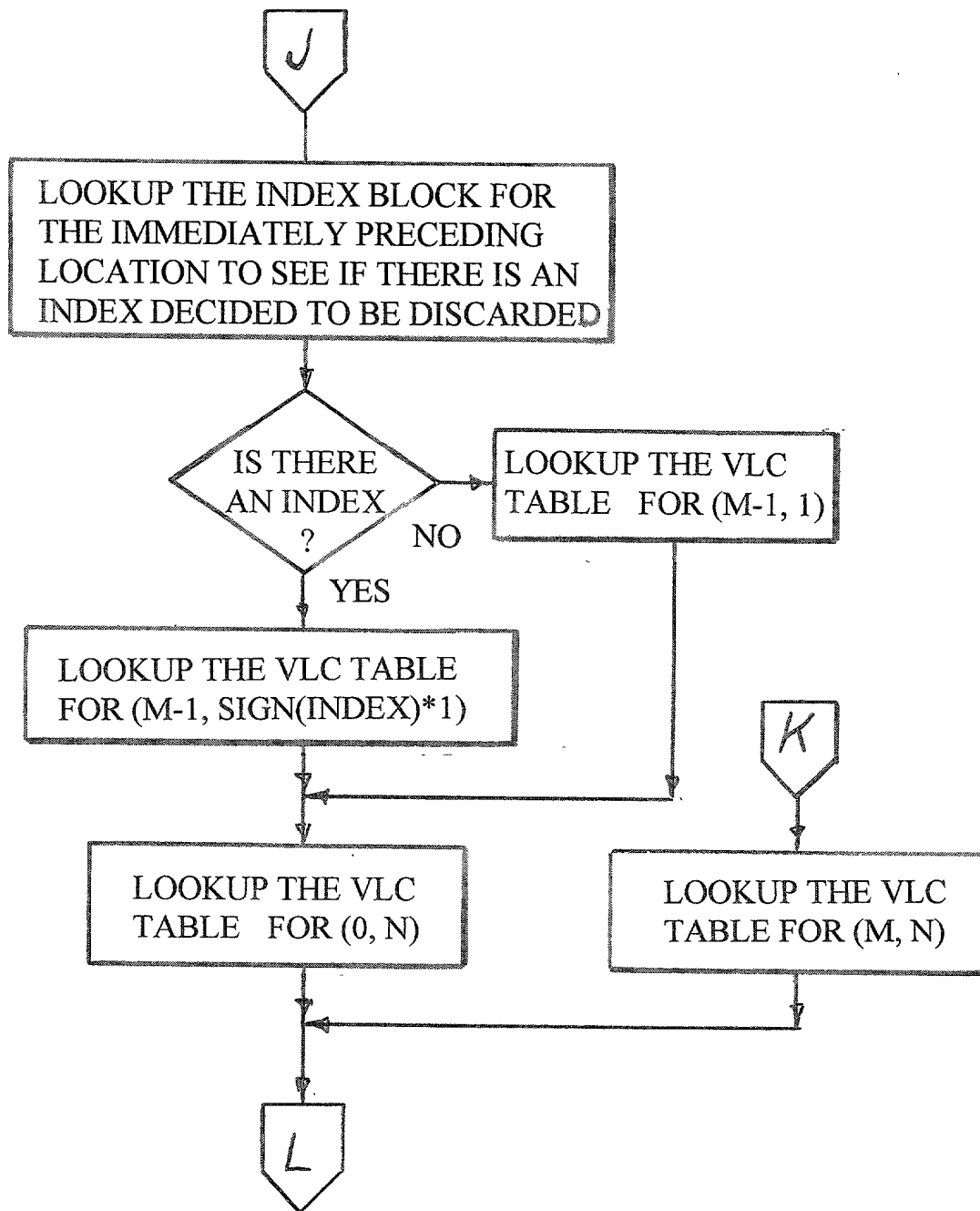


FIG. 39

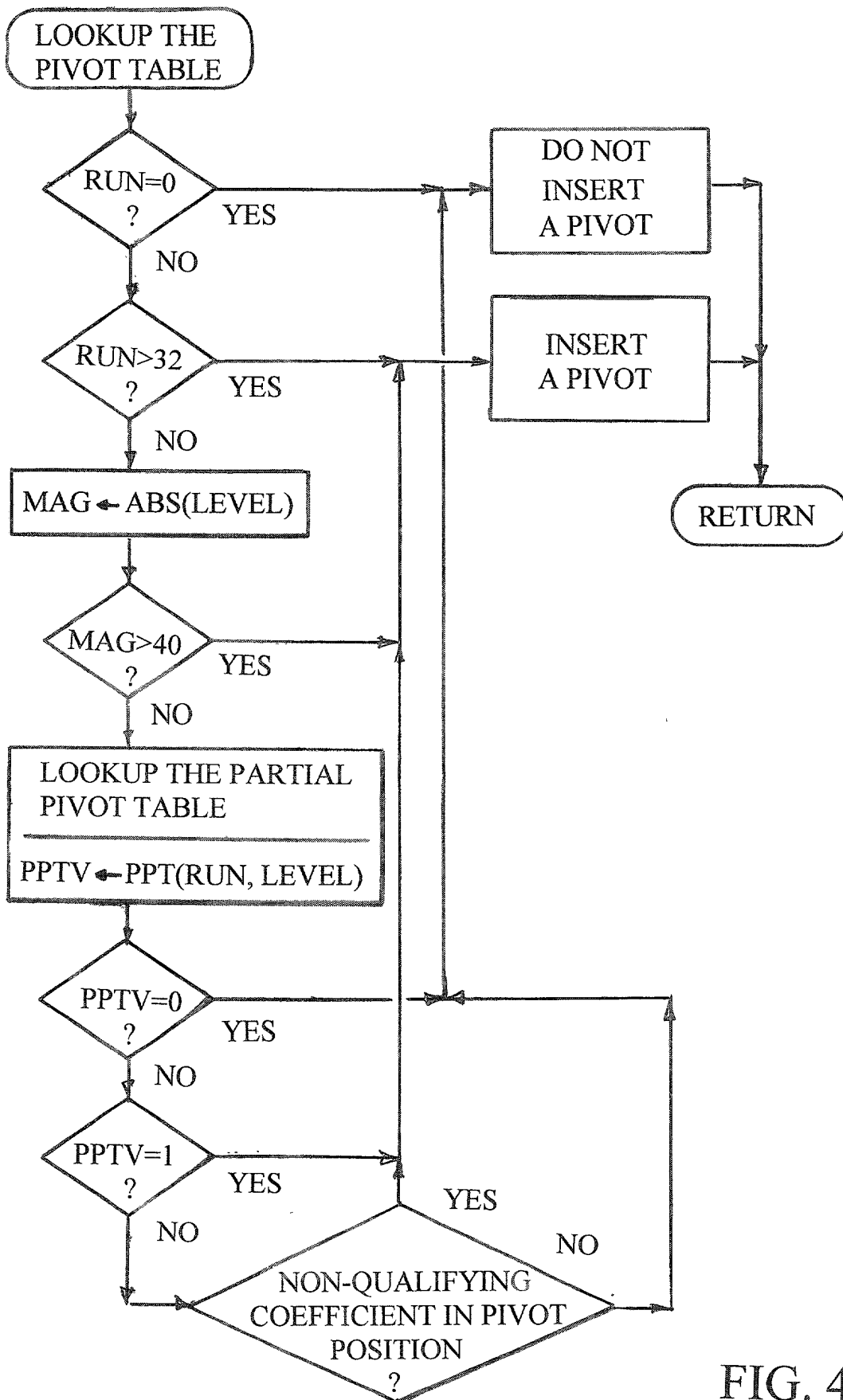


FIG. 40

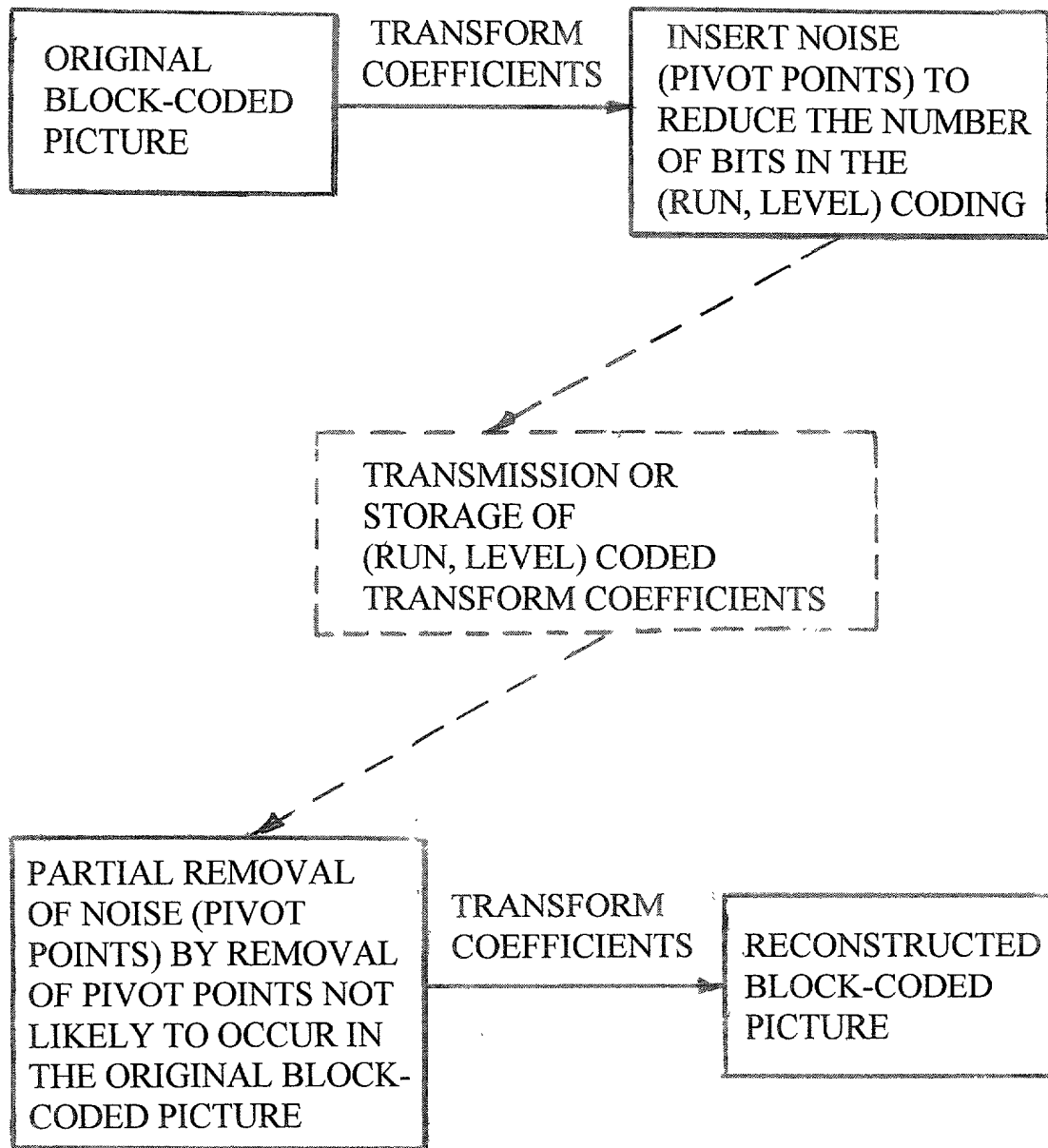


FIG. 41

```

graph TD
    A([ENCODE/TRANSCODE  
WITH PIVOT INSERTION]) --> B{WILL  
DECODER ATTEMPT  
REMOVAL OF  
PIVOTS  
?}
    B -- NO --> C[INSERT PIVOTS HAVING  
A LEVEL OF +1 OR -1,  
SELECTED AT RANDOM]
    B -- YES --> D[INSERT PIVOTS ALL  
HAVING A LEVEL  
OF +1]
    C --> E([END])
    D --> F([END])

```

FIG. 42

FIG. 42

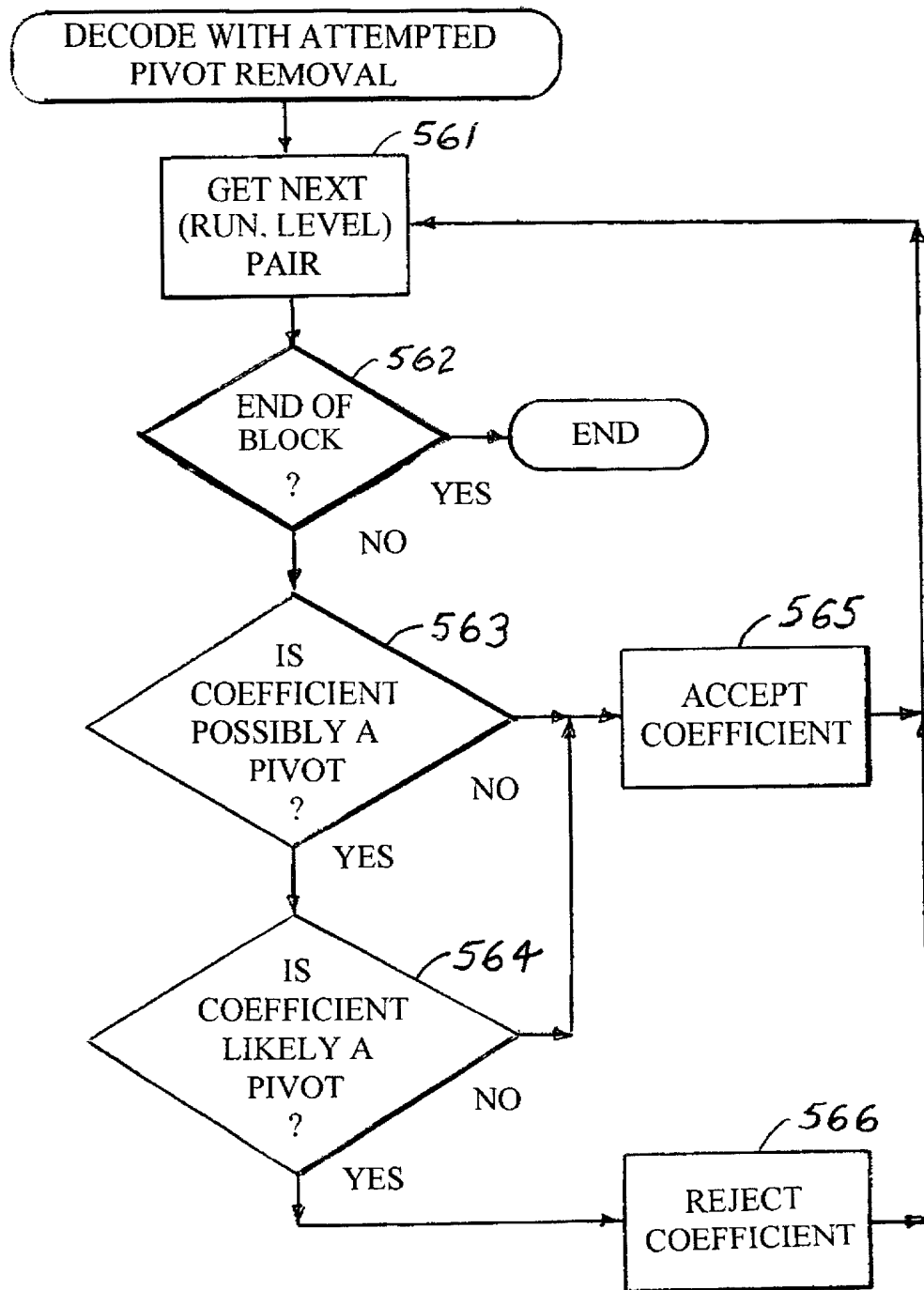


FIG. 43

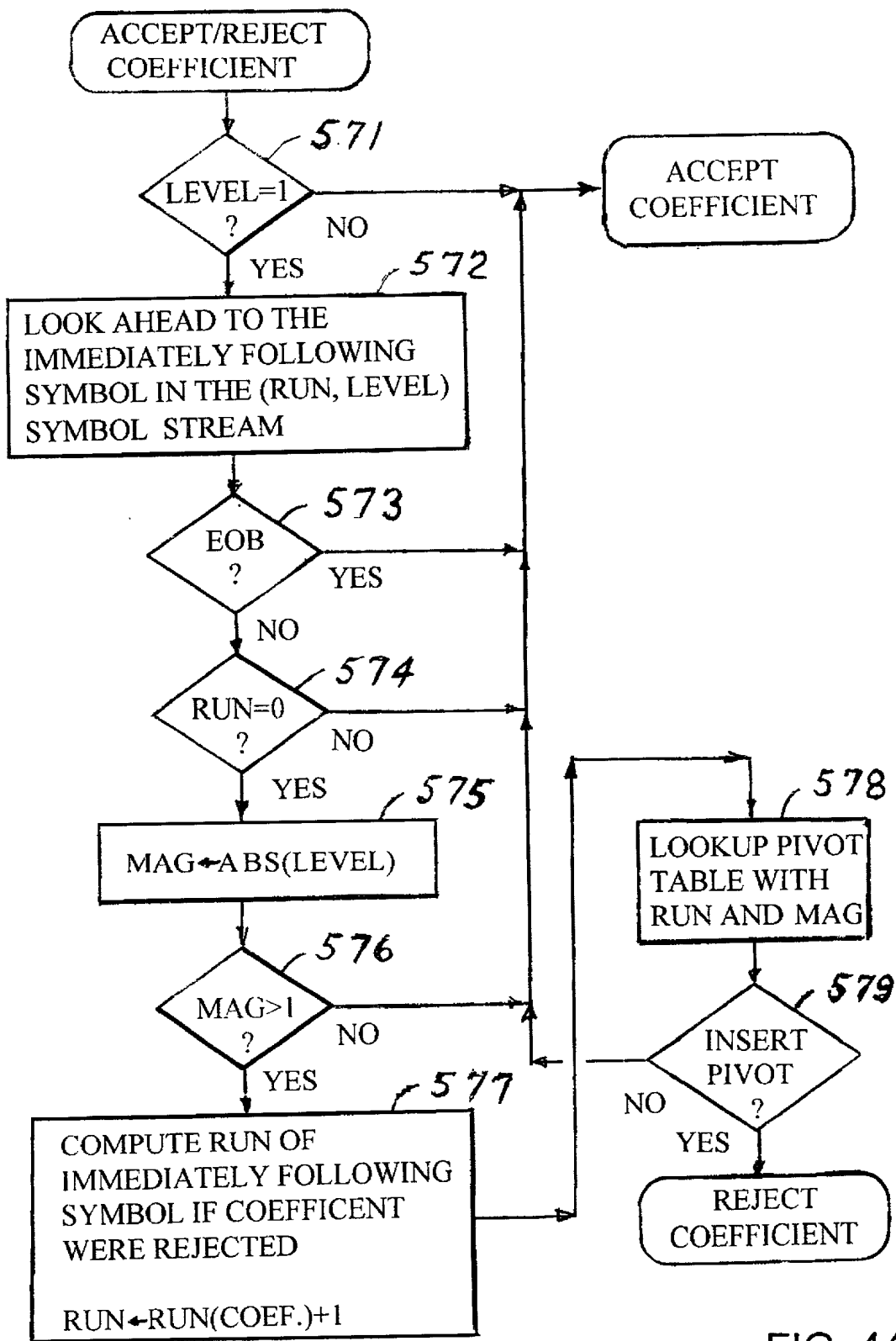


FIG. 44

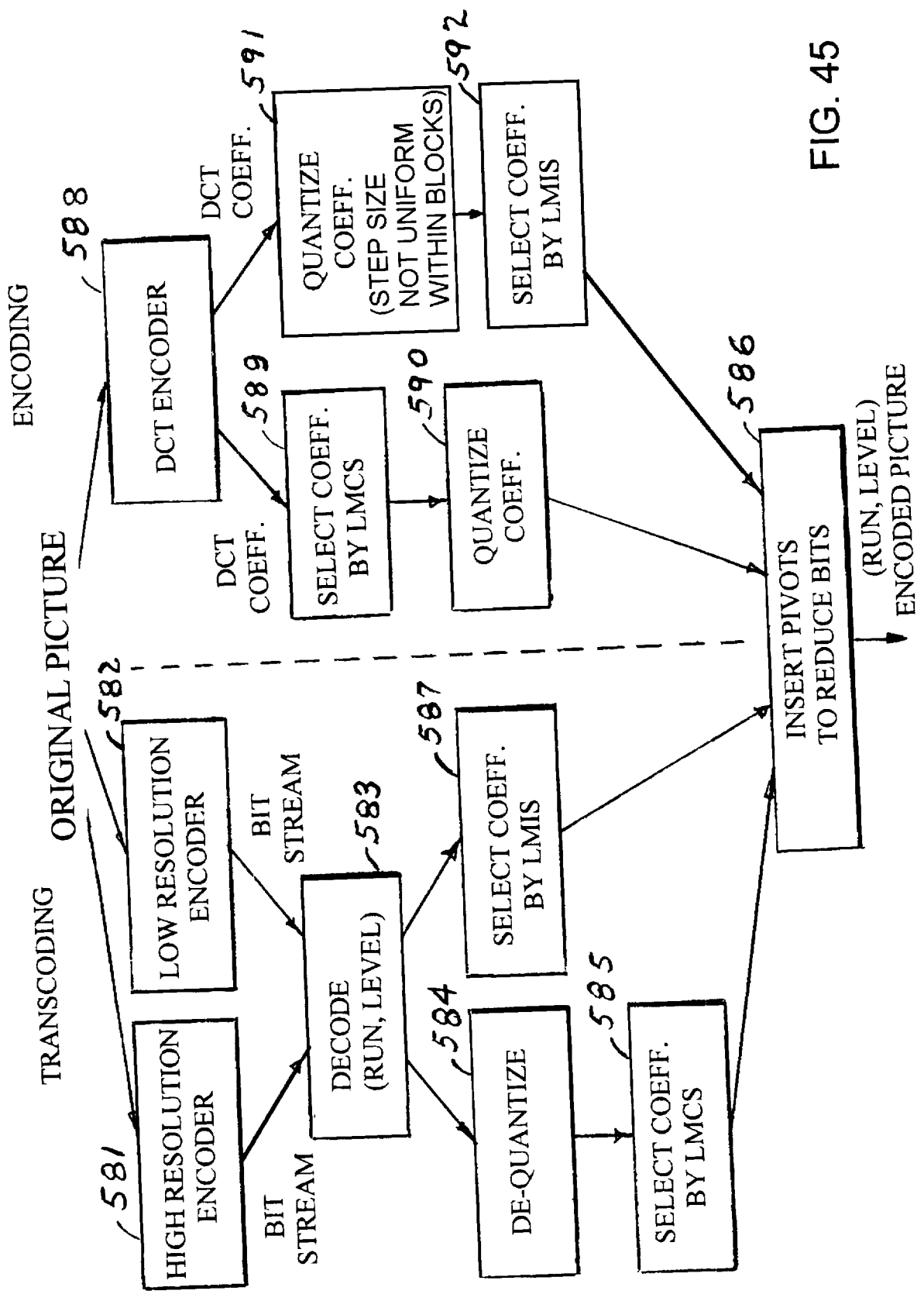


FIG. 45